V15269

FUNAI

SERVICE MANUAL

Sec. 1: Main Section

- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA' s

Sec. 2: Deck Mechanism Section

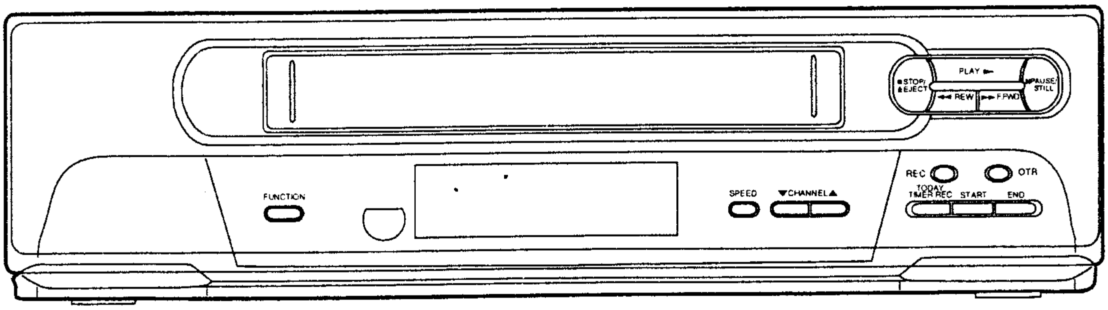
- Standard Maintenance
- Alignment for Mechanism
- Disassembly/Assembly of Mechanism
- Front Loading Assembly
- Alignment Procedures of Mechanism
- Schematic Diagrams
- CBA' s

Sec. 3: Exploded views and Parts List Section

- Exploded views
- Parts List

VIDEO CASSETTE RECORDER

9A-1011 / 9A-1211


■STOP/
▲EJECT
PLAY
◄◄ REW
►► F.FWD
PAUSE/
STILL
FUNCTION
SPEED
▼CHANNEL▲
REC
OTR
TODAY
TIMER REC
START
END

VHS
PAL

MAIN SECTION

VIDEO CASSETTE RECORDER

9A-1011 / 9A-1211

Sec. 1: Main Section
- ● Specifications
- ● Preparation for Servicing
- ● Adjustment Procedures
- ● Schematic Diagrams
- ● CBA' s

TABLE OF CONTENTS

Specifications .... 1·1–1
Important Safety Precautions .... 1·2–1
Standard Notes for Servicing .... 1·3–1
Preparation for Servicing .... 1·4–1
Cabinet Disassembly Instructions .... 1·5–1
Block Diagrams .... 1·6–1
Electrical Adjustment Instructions .... 1·7–1
Schematic Diagrams / CBA' s and Test Points .... 1·8–1
Waveforms .... 1·8–10
Wiring Diagram .... 1·9–1
System Control Timing Charts .... 1·10-1
IC Pin Function Description .... 1·11 -1
Lead Identification .... 1·12-1

SPECIFICATIONS

Description	Unit	Minimum	Nominal	Maximum	Remark
1. Video					
1-1. Video Output (PB)	Vp-p	0.8	1.0	1.2	F6-A
1-2. Video Output (R/P)	Vp-p	0.8	1.0	1.2	
1-3. Video S/N Y (R/P)	dB	40	45		HPF:1KHz
INPUT:50% WHITE					LPF:5MHz
					SC TRAP ON
1-4. Video Color S/N AM (R/P)	dB	35	41		HPF:1KHz
1-5. Video Color S/N PM (R/P)	dB	30	36		LPF:500KHz
INPUT:100% Color					SC TRAP ON
1-6. Resolution (PB)	Line	230	240		F6-M
2. Servo					
2-1. Jitter Low	µsec		0.07	0.12	F6-N
2-2. Wow & Flutter	%		0.3	0.6	E-30, CCIR, WTD
3. Normal Audio					
3-1. Output (PB)	dBV	-10	-6	-2	F6-A
3-2. Output (R/P)	dBV	-10	-6	-1.5	
3-3. S/N (R/P)	dB	36	40		
3-4. Distortion (R/P)	%		1.5	4.0	INPUT:-10dBV
3-5. Freq. resp (R/P) at 200Hz	dB	-6	-3		
(-20dB ref. 1kHz) at 6kHz	dB	-6	-3		

Note: Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety.
Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:
  1) Wires covered with PVC tubing
  2) Double insulated wires
  3) High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:
  1) Insulation tape
  2) PVC tubing
  3) Spacers
  4) Insulators for transistors

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).

G. Check that replaced wires do not contact sharp edges or pointed parts.

H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. Crimp type wire connector
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.
Replacement procedure
  1) Remove the old connector by cutting the wires at a point close to the connector.
Important: Do not re-use a connector. (Discard it.)
  2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
  3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
  4) Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.

L. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

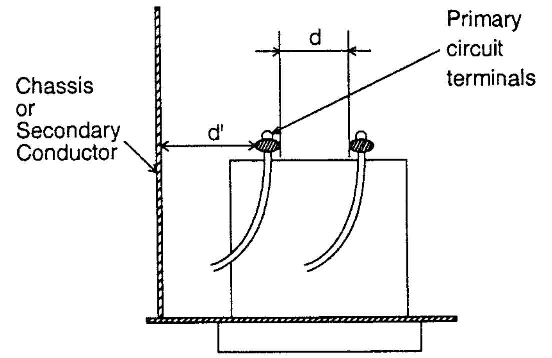


Fig. 1

Table 1 : Ratings for selected area

AC Line Voltage	Region	Clearance Distance (d) (d')
220 to 240 V	Europe or Australia	≥ 3mm(d) ≥ 6 mm(d')

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON) :

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

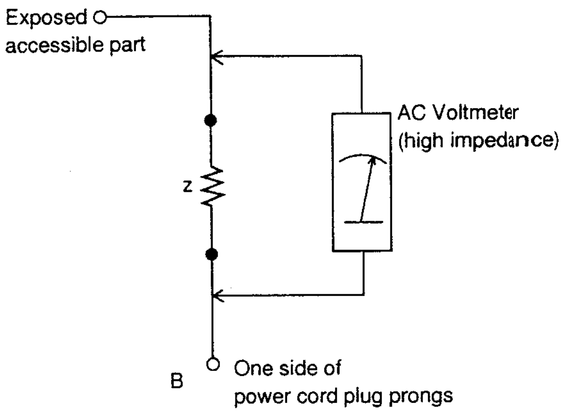


Fig. 2

Table 2 : Leakage current ratings for selected areas

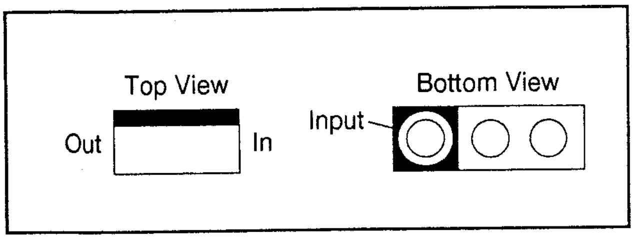
AC Line Voltage	Region	Load Z	Leakage Current (i)	One side of powercord plug prongs (B) to:
220 to 240 V	Europe or Australia	2kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	RF or Antenna terminals
		50kΩ RES. Connected in parallel	i≤0.7mA AC Peak i≤2mA DC	A/V Input, Output

Note: This table is unofficial and for reference only.
Be sure to confirm the precise values.

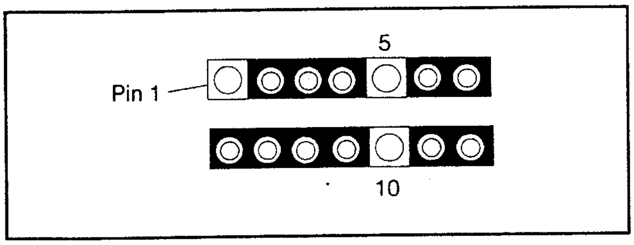
STANDARD NOTES FOR SERVICING

Circuit Board Indications

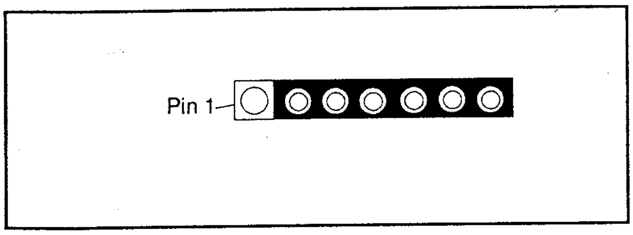
a. The output pin of the 3 pin Regulator ICs is indicated as shown.



b. For other ICs, pin 1 and every fifth pin are indicated as shown.

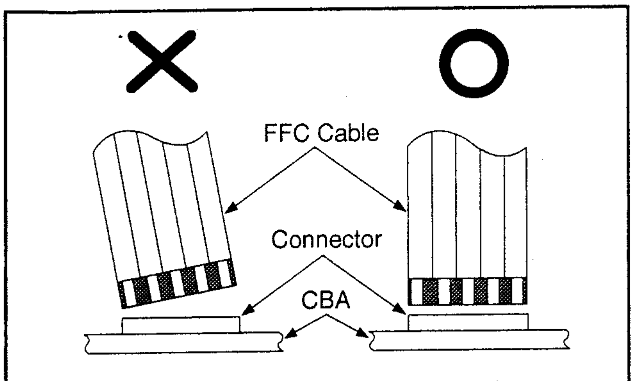


c. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



* Be careful to avoid a short circuit.

How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

(1) Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

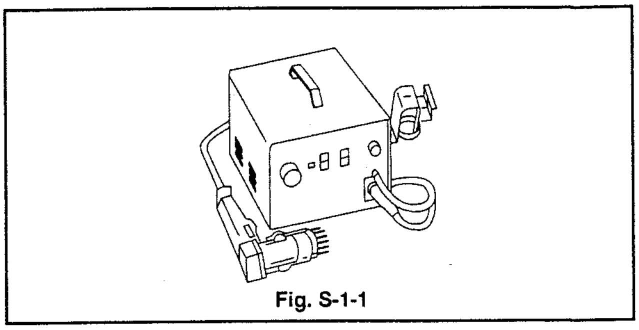


Fig. S-1-1

(2) Remove the flat pack-IC with tweezers while applying the hot air.

(3) Bottom of the flat pack-IC is fixed with glue to the CBA, when removing entire flat pack-IC. First apply soldering iron to center of the flat pack-IC and Heat up. Then Remove (glue will be melted). (Fig. S-1-8)

(4) Release the flat pack-IC from the CBA using Tweezers. (Fig. S-1-8)

Caution:

1. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
2. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder- lands under the IC when removing it.

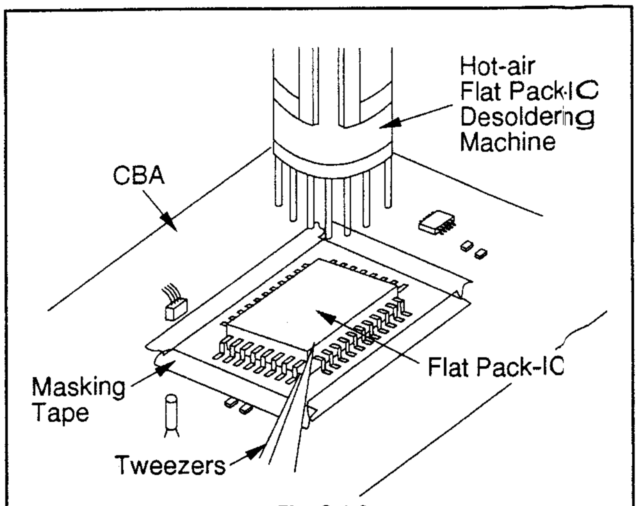


Fig. S-1-2

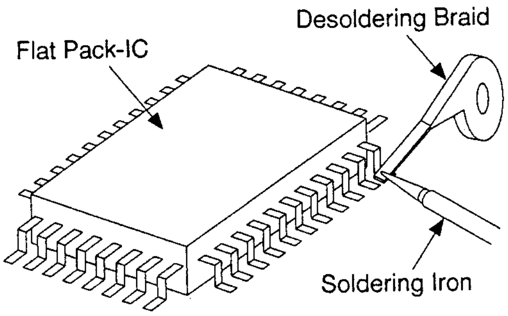


Fig. S-1-3

With Soldering Iron:

(1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

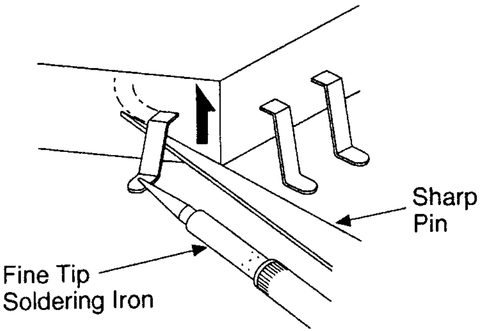


Fig. S-1-4

(2) Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

(3) Bottom of the flat pack-IC is fixed with glue to the CBA, when removing entire flat pack-IC. First apply soldering iron to center of the flat pack-IC and Heat up. Then Remove (glue will be melted). (Fig. S-1-8)

(4) Release the flat pack-IC from the CBA using Tweezers. (Fig. S-1-8)

With Iron Wire:

(1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

(2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.

(3) While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig.S-1-5.

(4) Bottom of the flat pack-IC is fixed with glue to the CBA, when removing entire flat pack-IC. First apply soldering iron to center of the flat pack-IC and Heat up. Then Remove (glue will be melted). (Fig. S-1-8)

(5) Release the flat pack-IC from the CBA using Tweezers. (Fig. S-1-8)

Note:

When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

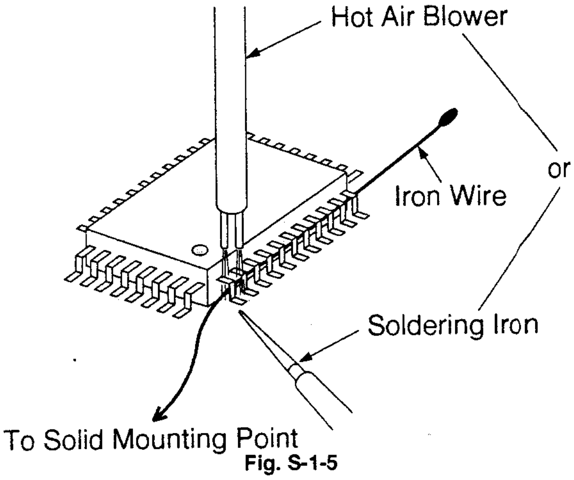


Fig. S-1-5

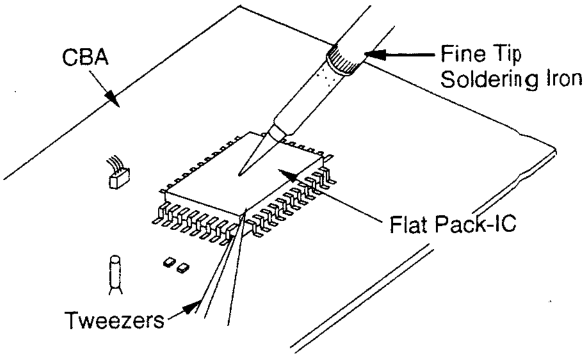


Fig. S-1-8

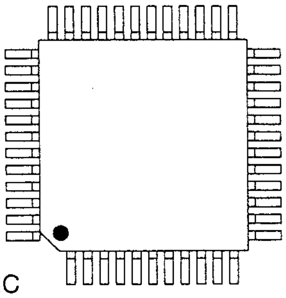
2. Installation

(1) Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.

(2) The " • " mark on the flat pack-IC indicates pin 1. (See Fig. S-1-6.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then pre- solder the four corners of the flat pack-IC. (See Fig. S-1-7.)

(3) Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

Example :



Pin 1 of the Flat Pack-IC
is indicated by a " ● " mark.

Fig. S-1-6

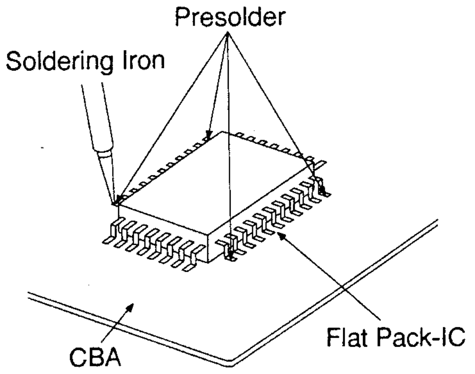

Presolder
Soldering Iron
CBA
Flat Pack-IC

Fig. S-1-7

Instructions for Handling Semiconductors

Electrostatic breakdown of the semiconductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

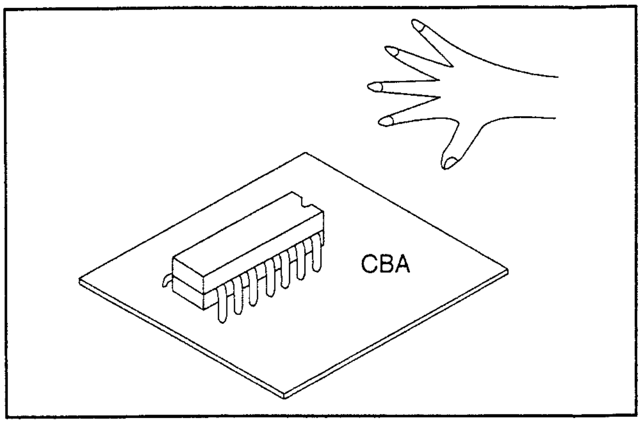
1. Ground for Human Body

Be sure to wear a grounding band (1M ohm) that is properly grounded to remove any static electricity that may be charged on the body.

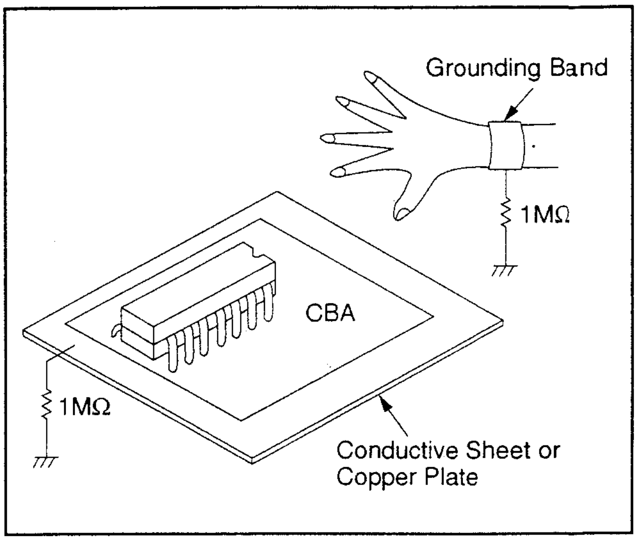
2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1M ohm) on the workbench or other surface, where the semiconductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semiconductors with your clothing.

Incorrect



Correct


Grounding Band
1MΩ
CBA
1MΩ
Conductive Sheet or
Copper Plate

PREPARATION FOR SERVICING

How to use Deck Extension Cable

(1) Remove the Deck Mechanism Assembly. If needed, remove the Main CBA from the chassis.

(2) Use the Deck Extension Cable to connect the Deck Mechanism Assembly to the Main CBA. (Deck Extension Cable: N1091XA)

Note: Use the connectors grouped as "2H."

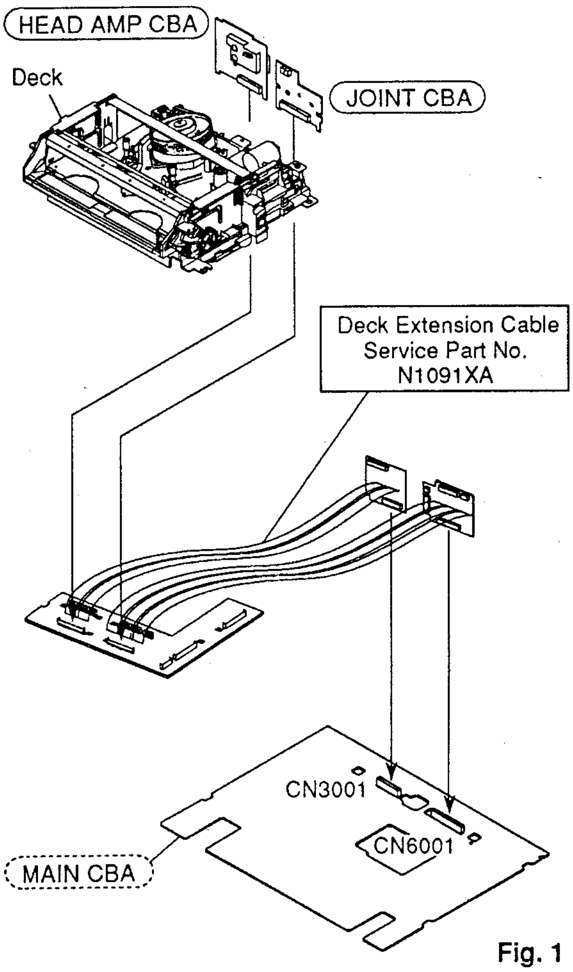

HEAD AMP CBA
Deck
JOINT CBA
Deck Extension Cable
Service Part No.
N1091XA
CN3001
CN6001
MAIN CBA

Fig. 1

How to Enter the Service Mode

Note: When the unit is set in the service mode, the whole display will keep blinking.

About Optical Sensors

Caution:

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate unexpectedly.

What to do for preparation

After plugging in the unit, connect TP6003 (SENSOR INHIBITION) to TP6004 (GROUND). This will stop the function of Tape Start and End Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.)

Bring a tape to the tape inlet of the Deck Mechanism Assembly and press the PLAY button. The tape will be loaded into the Deck Mechanism Assembly.

Note: Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.

About REC-Safety Switch

Caution:

The REC-Safety Switch is directly mounted on the Main CBA. When the Deck Mechanism Assembly is removed from the Main CBA for servicing, this switch does not work automatically.

What to do for preparation

In order to record, press the Rec button while pushing REC-SAFETY SW on the Main CBA.

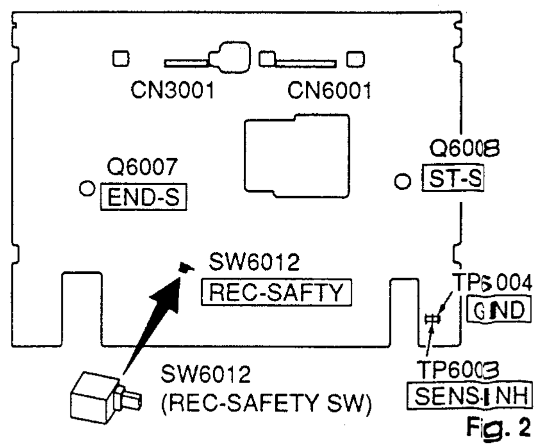
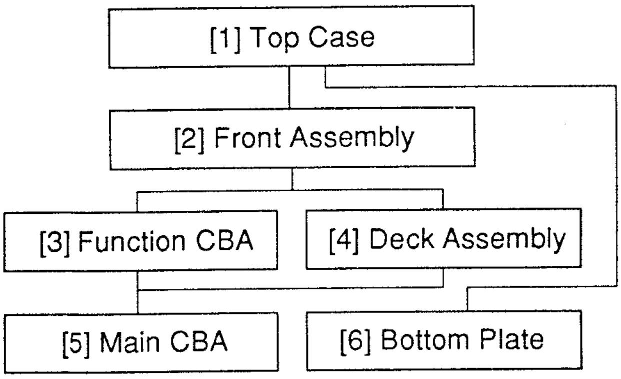

CN3001
CN6001
Q6007
END-S
Q6008
ST-S
SW6012
REC-SAFTY
TP6004
GND
SW6012
(REC-SAFETY SW)
TP6003
SENS-INH

Fig. 2

CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/ *UNHOOK/UNLOCK/ RELEASE/UNPLUG/ DESOLDER	Note
[1]	Top Case	1	5(S-1)	-
[2]	Front Assembly	2, 3	*7(L-1)	1
[3]	Function CBA	2, 4	*(L-2), (CN5501)	2
[4]	Deck Assembly	5	7(S-2), (S-3) (CN2901, CN3501)	3
[5]	Main CBA	4, 6, 7	2(S-4), *2(L-3)	4
[6]	Bottom Plate	6	*2(L-4)	5

① ② ③ ④ ⑤

①: Identification (location) No. of parts in the figures

②: Name of the part

③: Figure Number for reference

④: Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, L=Locking Tab, S=Screw, CN=Connector
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(S-2) = two Screws (S-2),
2(L-2) = two Locking Tabs (L-2)

⑤: Refer to "Reference Notes".

Reference Notes

CAUTION Locking Tabs (L-1) are fragile. Be careful not to break them.

1. Release 7 Locking Tabs (L-1). To do this, first release three Locking Tabs (A) at the bottom, and then four Locking Tabs (B) at the top. (Fig. 2, 3)
2. Disconnect Connector (CN5501) to remove Function CBA. Hold Main CBA while pulling up Function CBA. (Fig. 4)
3. Remove 7 Screws (S-2) and (S-3). Then slowly lift Deck Assembly up. Lifting Deck Assembly disconnects 2 Connectors (CN2901, CN3501). (Fig. 5)
4. First remove 2 Screws (S-4). Then, releasing 2 Locking Tabs (L-3), lift Main CBA. (Fig. 6, 7)
5. If you are disassembling Bottom Plate before Main CBA, remove 2 Screws (S-4) now. Then slide Bottom Plate in the direction of the big arrow as you press down two Locking Tabs (L-4).

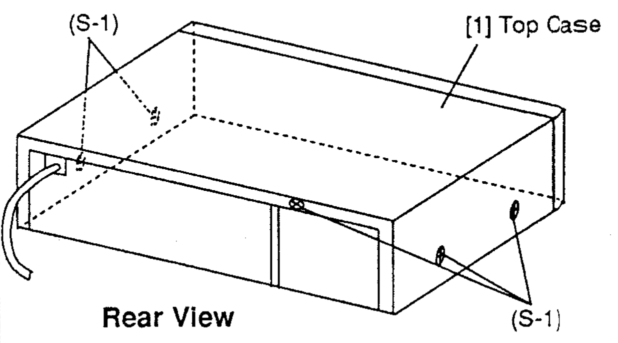


Fig. 1

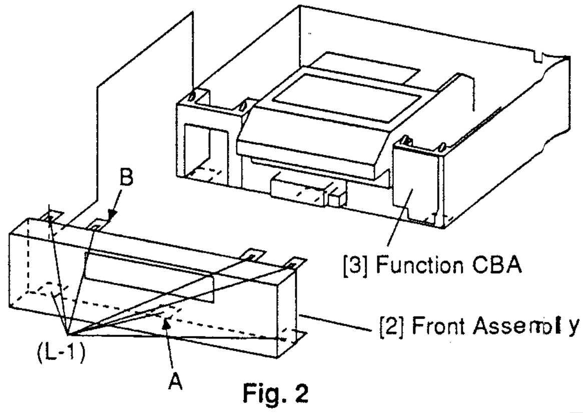


Fig. 2

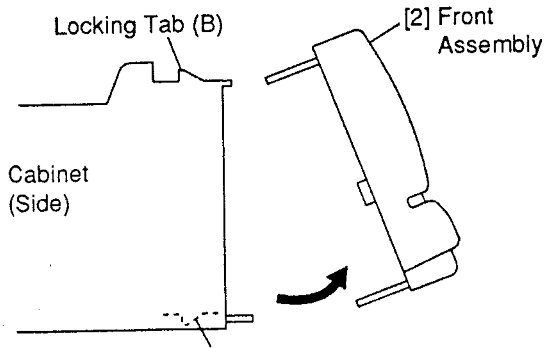

Locking Tab (B)
[2] Front Assembly
Cabinet (Side)
Locking Tab (A)

Fig. 3

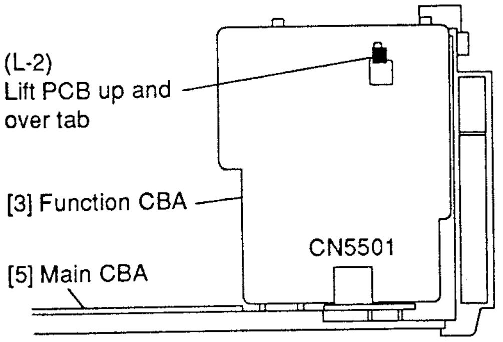

(L-2) Lift PCB up and over tab
[3] Function CBA
CN5501
[5] Main CBA

Fig. 4

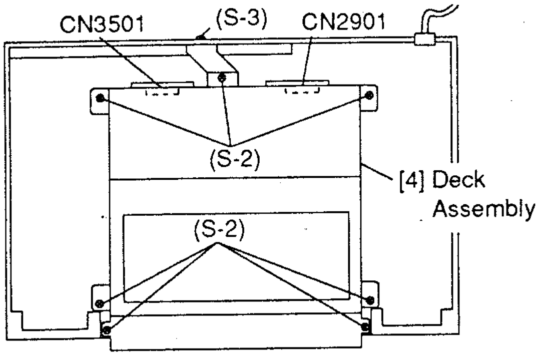

CN3501
(S-3)
CN2901
(S-2)
[4] Deck Assembly
(S-2)
Top View

Fig. 5

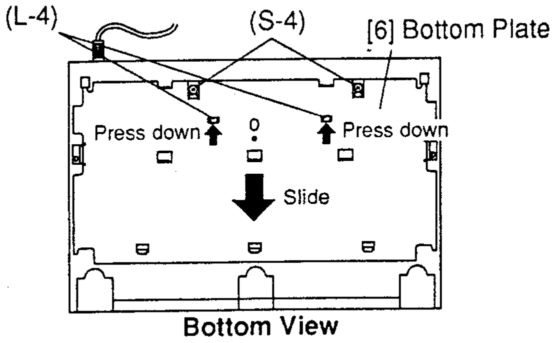

(L-4)
(S-4)
[6] Bottom Plate
Press down
Press down
Slide
Bottom View

Fig. 6

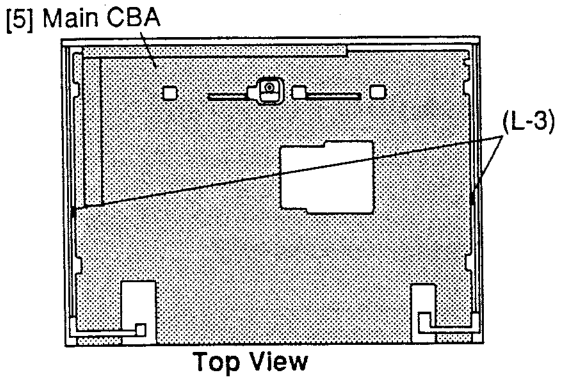

[5] Main CBA
(L-3)
Top View

Fig. 7

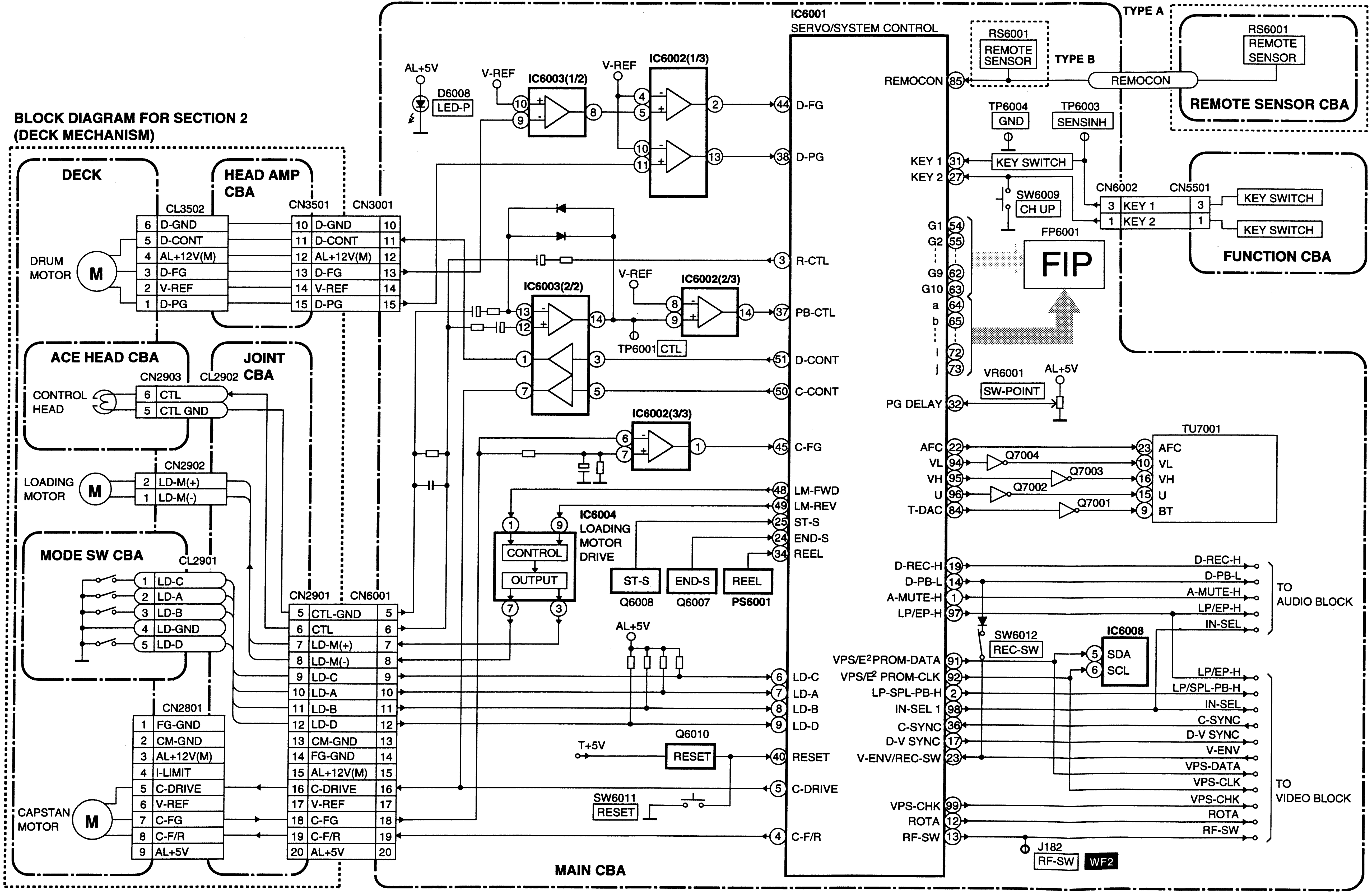
Servo/System Control Block Diagram

BLOCK DIAGRAMS

The following table shows the difference between Type A and B of Remote Control Unit.

	Maker No.	Remote Sensor CBA (MCV-D)	Marking of 27N on the surface of the unit.
Type A	HC-278N	Used	Yes
Type B	PIC-12042LF	Not Used	No

Note: Remote Control Unit RS6001 has two types; Type A to be mounted on Remote Sensor CBA (MCV-D) and Type B to be directly mounted on Main CBA (MCV-A). (Type A is included in Remote Sensor CBA's table in the parts list.) Type B does not employ a remote sensor PCB. Type A and B are interchangeable for the same Main CBA (MCV-A).

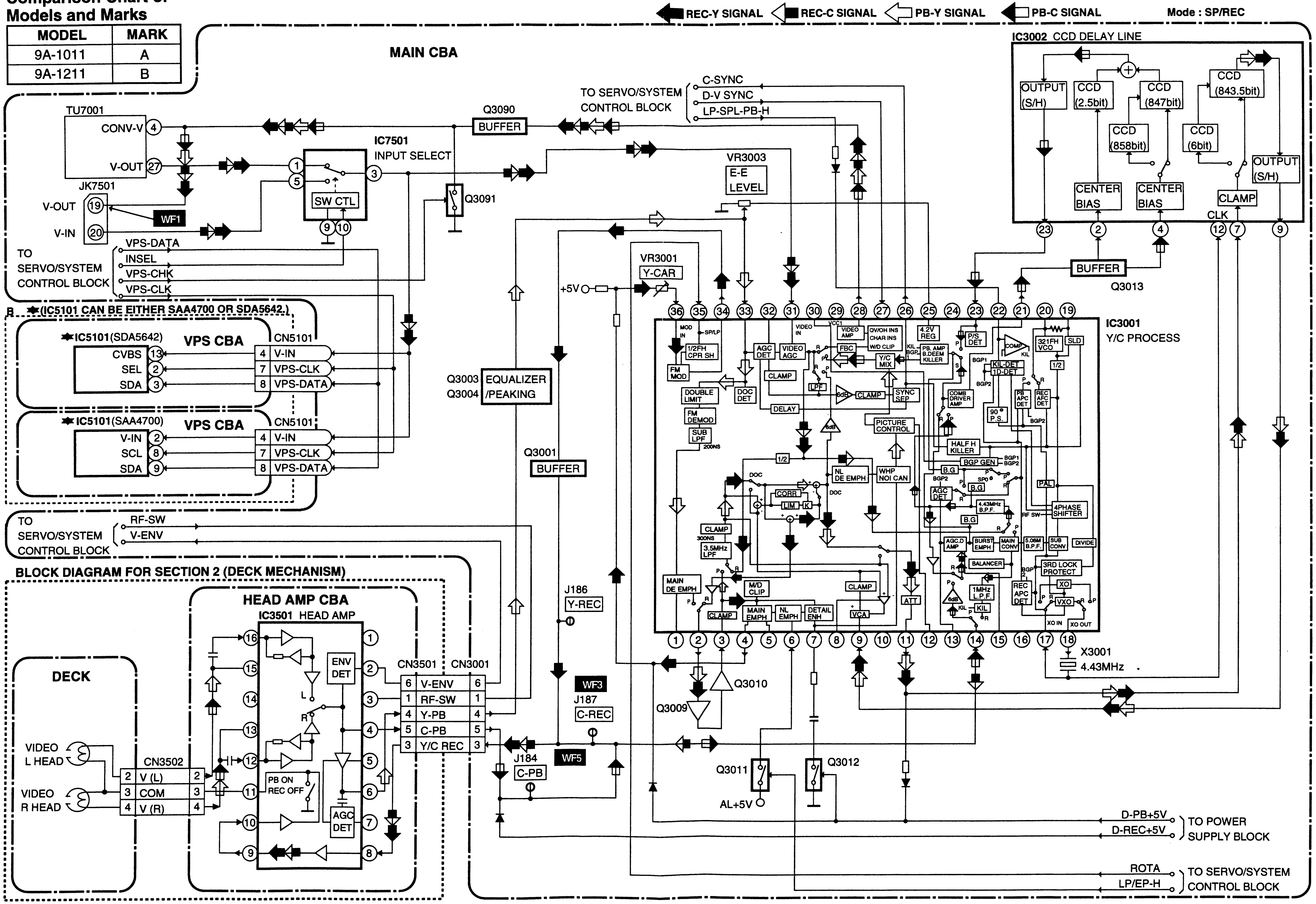


BLOCK DIAGRAM FOR SECTION 2
(DECK MECHANISM)
DECK
HEAD AMP CBA
CL3502
CN3501
CN3001
DRUM MOTOR
M
6 D-GND
5 D-CONT
4 AL+12V(M)
3 D-FG
2 V-REF
1 D-PG
10 D-GND 10
11 D-CONT 11
12 AL+12V(M) 12
13 D-FG 13
14 V-REF 14
15 D-PG 15
ACE HEAD CBA
CN2903
CL2902
JOINT CBA
CONTROL HEAD
6 CTL
5 CTL GND
CN2902
LOADING MOTOR
2 LD-M(+)
1 LD-M(-)
MODE SW CBA
CL2901
1 LD-C
2 LD-A
3 LD-B
4 LD-GND
5 LD-D
CN2801
1 FG-GND
2 CM-GND
3 AL+12V(M)
4 I-LIMIT
5 C-DRIVE
6 V-REF
7 C-FG
8 C-F/R
9 AL+5V
CAPSTAN MOTOR
CN2901
CN6001
5 CTL-GND 5
6 CTL 6
7 LD-M(+) 7
8 LD-M(-) 8
9 LD-C 9
10 LD-A 10
11 LD-B 11
12 LD-D 12
13 CM-GND 13
14 FG-GND 14
15 AL+12V(M) 15
16 C-DRIVE 16
17 V-REF 17
18 C-FG 18
19 C-F/R 19
20 AL+5V 20
AL+5V
D6008
LED-P
V-REF
IC6003(1/2)
10
9
8
V-REF
IC6002(1/3)
4
5
2
10
11
13
IC6003(2/2)
13
12
14
1
3
7
5
V-REF
IC6002(2/3)
8
9
14
TP6001
CTL
IC6002(3/3)
6
7
1
IC6004
LOADING MOTOR DRIVE
1
9
CONTROL
OUTPUT
7
3
ST-S
Q6008
END-S
Q6007
REEL
PS6001
AL+5V
T+5V
Q6010
RESET
SW6011
RESET
MAIN CBA
IC6001
SERVO/SYSTEM CONTROL
44 D-FG
38 D-PG
3 R-CTL
37 PB-CTL
51 D-CONT
50 C-CONT
45 C-FG
48 LM-FWD
49 LM-REV
25 ST-S
24 END-S
34 REEL
6 LD-C
7 LD-A
8 LD-B
9 LD-D
40 RESET
5 C-DRIVE
4 C-F/R
REMOCON 85
KEY 1 31
KEY 2 27
G1 54
G2 55
G9 62
G10 63
a 64
b 65
i 72
j 73
PG DELAY 32
AFC 22
VL 94
VH 95
U 96
T-DAC 84
D-REC-H 19
D-PB-L 14
A-MUTE-H 1
LP/EP-H 97
VPS/E²PROM-DATA 91
VPS/E² PROM-CLK 92
LP-SPL-PB-H 2
IN-SEL 1 98
C-SYNC 36
D-V SYNC 17
V-ENV/REC-SW 23
VPS-CHK 99
ROTA 12
RF-SW 13
RS6001
REMOTE SENSOR
TYPE B
TYPE A
REMOCON
RS6001
REMOTE SENSOR
REMOTE SENSOR CBA
TP6004
GND
TP6003
SENSINH
KEY SWITCH
SW6009
CH UP
CN6002
CN5501
3 KEY 1 3
1 KEY 2 1
KEY SWITCH
KEY SWITCH
FUNCTION CBA
FP6001
FIP
VR6001
SW-POINT
AL+5V
TU7001
Q7004
Q7003
Q7002
Q7001
23 AFC
10 VL
16 VH
15 U
9 BT
D-REC-H
D-PB-L
A-MUTE-H
LP/EP-H
IN-SEL
TO AUDIO BLOCK
SW6012
REC-SW
IC6008
5 SDA
6 SCL
LP/EP-H
LP/SPL-PB-H
IN-SEL
C-SYNC
D-V SYNC
V-ENV
VPS-DATA
VPS-CLK
VPS-CHK
ROTA
RF-SW
TO VIDEO BLOCK
J182
RF-SW
WF2

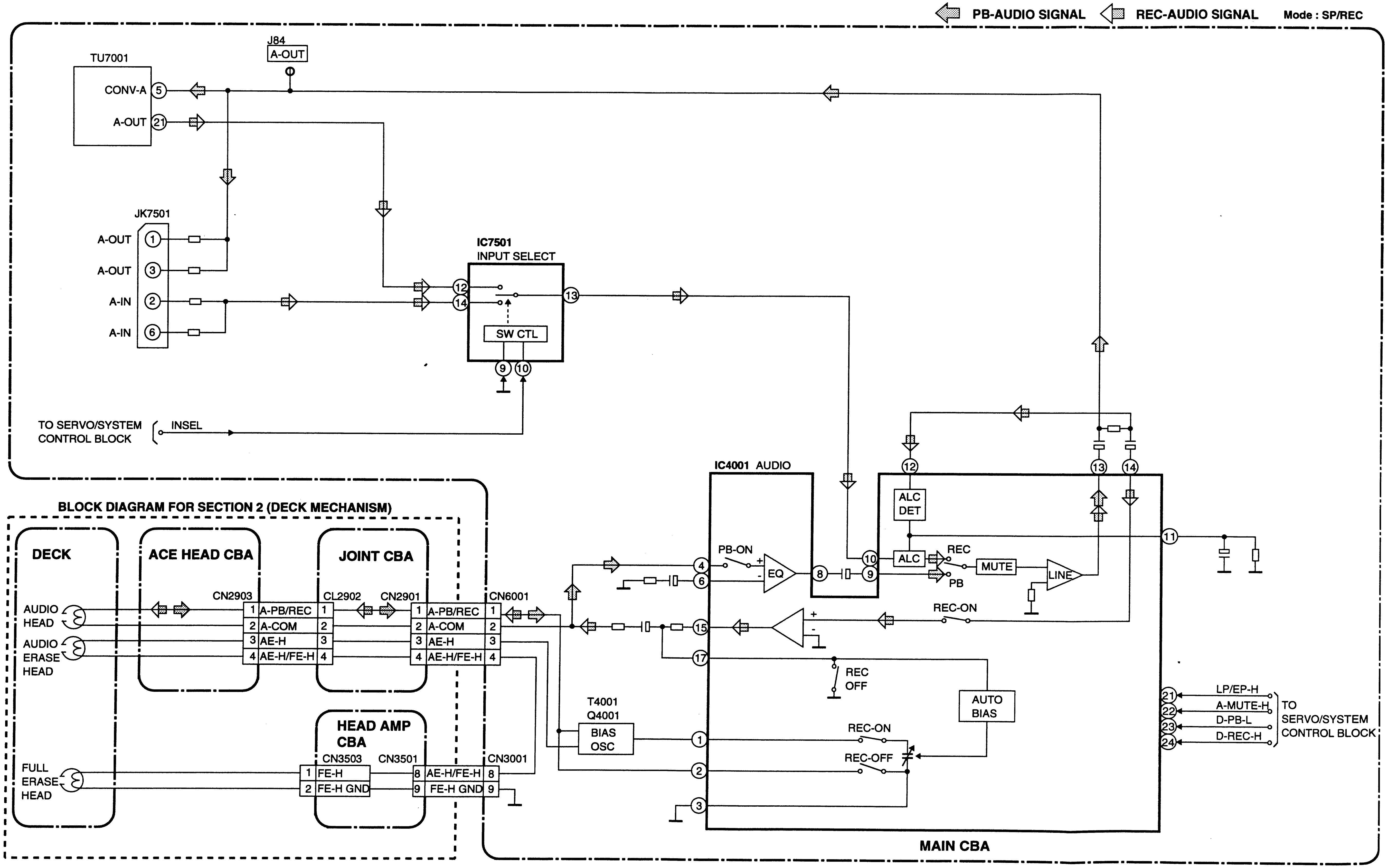
Video Block Diagram

Comparison Chart of Models and Marks

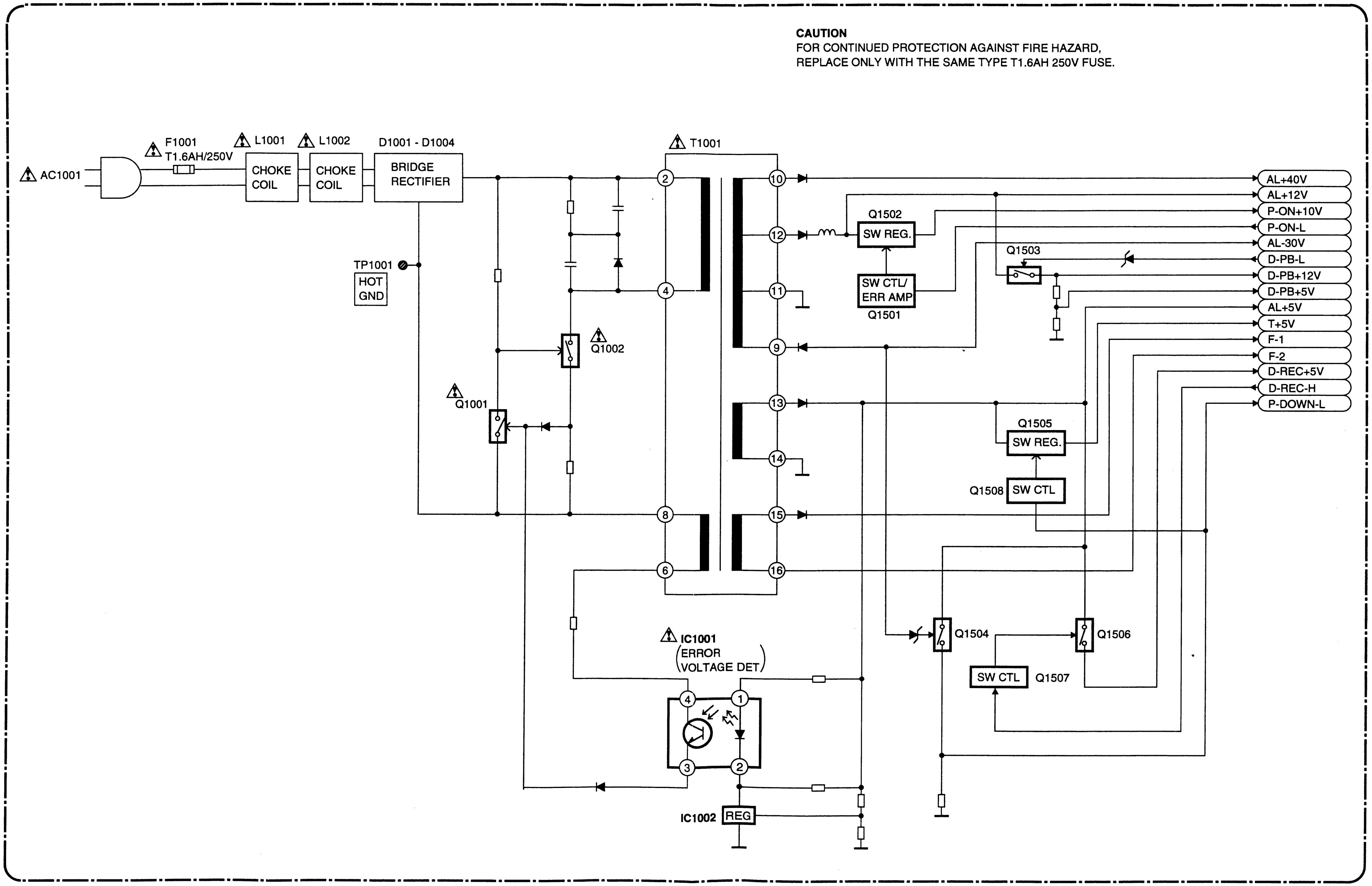
MODEL	MARK
9A-1011	A
9A-1211	B


REC-Y SIGNAL
REC-C SIGNAL
PB-Y SIGNAL
PB-C SIGNAL
Mode : SP/REC
MAIN CBA
TU7001
CONV-V
V-OUT
JK7501
V-OUT
V-IN
WF1
Q3090
BUFFER
IC7501
INPUT SELECT
SW CTL
Q3091
TO SERVO/SYSTEM CONTROL BLOCK
C-SYNC
D-V SYNC
LP-SPL-PB-H
VR3003
E-E LEVEL
VR3001
Y-CAR
+5V
TO SERVO/SYSTEM CONTROL BLOCK
VPS-DATA
INSEL
VPS-CHK
VPS-CLK
B ✱(IC5101 CAN BE EITHER SAA4700 OR SDA5642.)
✱IC5101(SDA5642)
VPS CBA
CVBS
SEL
SDA
CN5101
V-IN
VPS-CLK
VPS-DATA
✱IC5101(SAA4700)
VPS CBA
V-IN
SCL
SDA
CN5101
V-IN
VPS-CLK
VPS-DATA
Q3003 EQUALIZER
Q3004 /PEAKING
Q3001
BUFFER
TO SERVO/SYSTEM CONTROL BLOCK
RF-SW
V-ENV
BLOCK DIAGRAM FOR SECTION 2 (DECK MECHANISM)
HEAD AMP CBA
IC3501 HEAD AMP
ENV DET
PB ON
REC OFF
AGC DET
DECK
VIDEO L HEAD
VIDEO R HEAD
CN3502
V (L)
COM
V (R)
CN3501
CN3001
V-ENV
RF-SW
Y-PB
C-PB
Y/C REC
J186
Y-REC
WF3
J187
C-REC
J184
C-PB
WF5
Q3009
Q3010
Q3011
AL+5V
Q3012
IC3002 CCD DELAY LINE
OUTPUT (S/H)
CCD (2.5bit)
CCD (847bit)
CCD (858bit)
CCD (843.5bit)
CCD (6bit)
OUTPUT (S/H)
CENTER BIAS
CENTER BIAS
CLAMP
CLK
BUFFER
Q3013
IC3001
Y/C PROCESS
MOD IN
SP/LP
FM MOD
1/2FH CPR SH
DOUBLE LIMIT
FM DEMOD
SUB LPF
AGC DET
VIDEO AGC
CLAMP
DOC DET
DELAY
VIDEO AMP
FBC
LPF
6dB
QV/OH INS
CHAR INS
W/D CLIP
Y/C MIX
SYNC SEP
4.2V REG
PB. AMP B.DEEM KILLER
P/S DET
COMP
KIL-DET
1D-DET
321FH VCO
SLD
1/2
COMB DRIVER AMP
PB APC DET
REC AFC DET
90° P.S.
PICTURE CONTROL
HALF H KILLER
BGP GEN
NL DE EMPH
WHP NOI CAN
CORR
LIM
B.G
AGC DET
4.43MHz B.P.F.
PAL
4PHASE SHIFTER
CLAMP
3.5MHz LPF
MAIN DE EMPH
M/D CLIP
CLAMP
MAIN EMPH
NL EMPH
DETAIL ENH
VCA
ATT
AGC.D AMP
BURST EMPH
MAIN CONV
5.06M B.P.F.
SUB CONV
DIVIDE
BALANCER
3RD LOCK PROTECT
1MHz L.P.F.
KIL
REC APC DET
XO
VXO
XO IN
XO OUT
X3001
4.43MHz
D-PB+5V
D-REC+5V
TO POWER SUPPLY BLOCK
ROTA
LP/EP-H
TO SERVO/SYSTEM CONTROL BLOCK

Audio Block Diagram


PB-AUDIO SIGNAL
REC-AUDIO SIGNAL
Mode : SP/REC
TU7001
CONV-A
A-OUT
5
21
J84
A-OUT
JK7501
A-OUT
A-OUT
A-IN
A-IN
1
3
2
6
IC7501
INPUT SELECT
12
14
13
SW CTL
9
10
TO SERVO/SYSTEM CONTROL BLOCK
INSEL
IC4001 AUDIO
PB-ON
EQ
4
6
8
9
10
ALC DET
ALC
12
13
14
11
REC
PB
MUTE
LINE
REC-ON
15
17
REC OFF
AUTO BIAS
REC-ON
REC-OFF
1
2
3
T4001
Q4001
BIAS OSC
21
22
23
24
LP/EP-H
A-MUTE-H
D-PB-L
D-REC-H
TO SERVO/SYSTEM CONTROL BLOCK
MAIN CBA
BLOCK DIAGRAM FOR SECTION 2 (DECK MECHANISM)
DECK
AUDIO HEAD
AUDIO ERASE HEAD
FULL ERASE HEAD
ACE HEAD CBA
CN2903
1 A-PB/REC
2 A-COM
3 AE-H
4 AE-H/FE-H
JOINT CBA
CL2902
CN2901
1 A-PB/REC 1
2 A-COM 2
3 AE-H 3
4 AE-H/FE-H 4
CN6001
HEAD AMP CBA
CN3503
CN3501
1 FE-H
2 FE-H GND
8 AE-H/FE-H 8
9 FE-H GND 9
CN3001

Power Supply Block Diagram



CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE T1.6AH 250V FUSE.

AC1001
F1001
T1.6AH/250V
L1001
L1002
CHOKE COIL
CHOKE COIL
D1001 - D1004
BRIDGE RECTIFIER
TP1001
HOT GND
T1001
Q1002
Q1001
Q1502
SW REG.
SW CTL/ ERR AMP
Q1501
Q1503
Q1505
SW REG.
Q1508
SW CTL
Q1504
Q1506
SW CTL
Q1507
IC1001
(ERROR VOLTAGE DET)
IC1002
REG
2
4
8
6
10
12
11
9
13
14
15
16
1
2
3
4
AL+40V
AL+12V
P-ON+10V
P-ON-L
AL-30V
D-PB-L
D-PB+12V
D-PB+5V
AL+5V
T+5V
F-1
F-2
D-REC+5V
D-REC-H
P-DOWN-L

ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note: "CBA" is an abbreviation for "Circuit Board Assembly".

Notes:

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press both CHANNEL "UP" and "DOWN" buttons at the same time.
(Front Side only)

Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe, V-Range: 0.001~50V/Div., F-Frange: AC~DC-20MHz
2. PAL Pattern Generator (color bar with 100% white)
3. Alignment Tape (F6-A, Blank Tape)
4. Spectrum Analyzer

1. Head Switching Position Adjustment

Purpose: To determine the Head Switching point during playback.

Symptom of Misadjustment: May cause Head Switching noise or vertical jitter in the picture.

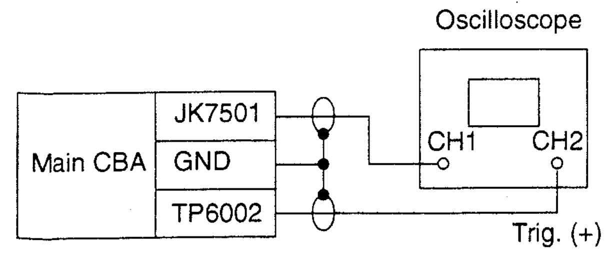
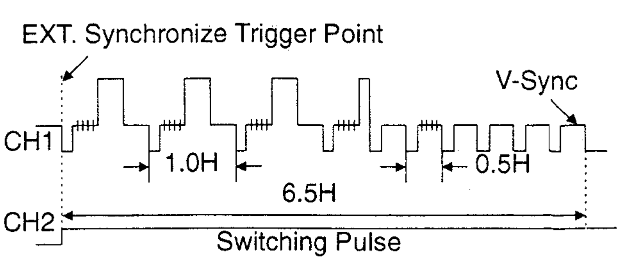
Test Point	Adj. Point	Mode	Input
JK7501 19pin (V-OUT) TP6002(RF-SW) GND	VR6001 (Switching Point)	PLAY (SP)	----
Tape	**Measurement Equipment**	**Spec.**	
F6-A	Oscilloscope	6.5H±1H (412.7±60µs)	
Connections of Measurement Equipment			
 Oscilloscope Main CBA JK7501 GND TP6002 CH1 CH2 Trig. (+)			

Figure 1



Reference Note:

TP6002, JK7501 19pin, VR6001: MAIN CBA

1. Play back the test tape and adjust VR6001 so that the V-sync front edge of the CH1 video output waveform is out the 6.5H(412.7µs) delayed position from the rising edge of the CH2 head switching pulse waveform.

2. V-Out Level Adjustment

Purpose: To set optimum luminance video out level.

Symptom of Misadjustment: If the video out level is too high, The TV may overload. If the level is too low, The S/N ratio deteriorates.

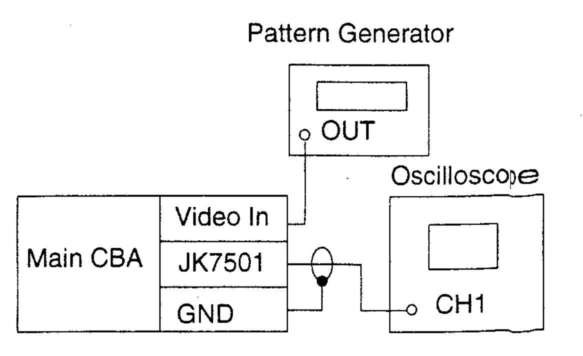
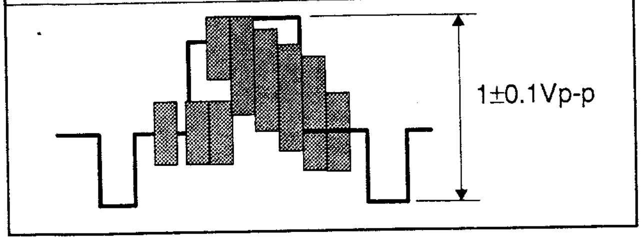
Test Point	Adj. Point	Mode	Input
JK7501 19pin (V-OUT) GND	VR3003 (E-E LEVEL)	E-E	Color Bar Signal with 100% white
Tape	**Measurement Equipment**	**Spec.**	
-----	Pattern Generator Oscilloscope	1±0.1Vp-p	
Connections of Measurement Equipment			
 Pattern Generator OUT Oscilloscope Main CBA Video In JK7501 GND CH1			

Figure 2



Reference Notes:

JK7501 19pin, VR3003 : MAIN CBA

1. Input the color bar signal with window 100% white to video input.
2. Adjust VR3003 so that the video level becomes 1±0.1Vp-p. (Connected to TV)

3. FM Carrier Adjustment

Purpose: To align FM carrier deviation.

Symptom of Misadjustment: If the deviation is not correct, abnormal contrast of light and dark on the picture may be seen.
If the carrier deviation is not correct, Beats appear on the picture.

Test Point	Adjustment Point	Mode	Input
TP3001 (Y-REC) TP6002 (RF-SW)	VR3001 (Y-CAR)	REC. (SP)	Color Bar with 100% white
Tape	**Measurement Equipment**	**Spec.**	
Blank Tape	pattern Generator Spectrum Analyzer Oscilloscope	Sync-tip 3.8±0.1MHz	

Connections of Measurement Equipment

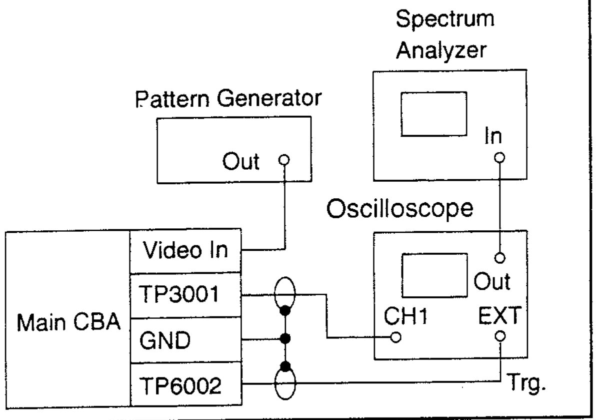
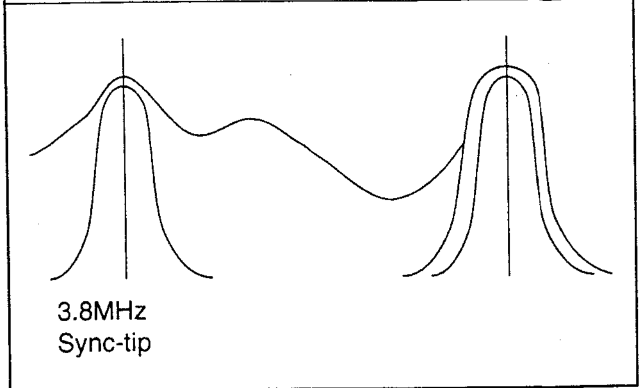

Spectrum
Analyzer
In
Pattern Generator
Out
Oscilloscope
Out
CH1
EXT
Trg.
Main CBA
Video In
TP3001
GND
TP6002

Figure 3



Reference Notes:

TP3001, TP6002, VR3001 : MAIN CBA

Reference Notes:

1. Input color bar signal with 100% white to video input.
2. Adjust Sync-tip to 3.8MHz± 0.1MHz by VR3001.

SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark " ⚠ " in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Capacitor Temperature Markings

Mark	Capacity change rate	Standard temperature	Temperature range
(B)	±10%	20°C	-25~+85°C
(F)	+30 -80%	20°C	-25~+85°C
(SR)	±15%	20°C	-25~+85°C
(Z)	+30 -80%	20°C	-10~+70°C

Note:

1 Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.

2 All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).

3 Resistor wattages are 1/5W or 1/6W unless otherwise specified.

4 All capacitance values are indicated in µF ($P=10^{-6}\mu F$).

5 All voltages are DC voltages unless otherwise specified.

6 Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

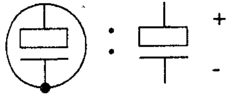
TUNER BLOCK SYMBOL NO. 70**

Example: "C08" in this "TUNER BLOCK" is C7008.

Capacitors and transistors are represented by the following symbols.

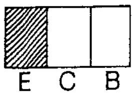
CBA Symbols

(Top View) (Bottom View)



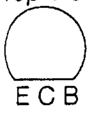
: Electrolytic Capacitor

(Bottom View)



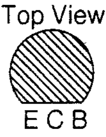
: Transistor or Digital Transistor

(Top View)



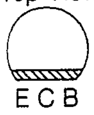
NPN Transistor

(Top View)



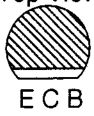
PNP Transistor

(Top View)



NPN Digital Transistor

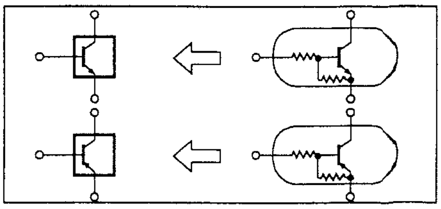
(Top View)



PNP Digital Transistor

Schematic Diagram Symbols

Digital Transistor



LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. **CAUTION:**
   FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

2. **CAUTION:**
   Fixed Voltage power supply circuit is used in this unit.
   If Main Fuse (F01) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. **Note:**

(1)Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.

(2)To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Wire Connectors

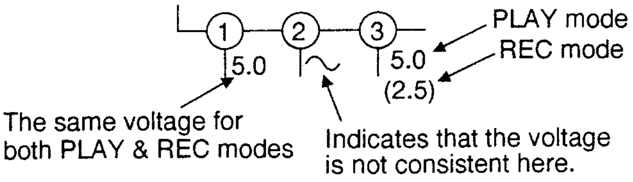
(1)Prefix symbol "CN" means "connector." (Can disconnect and reconnect)

(2)Prefix symbol "CL" means "wire-solder holes of the PCB." (Wire is soldered directly.)

5. Note: Mark "•" is a leadless (chip) component.

6. Mode: SP/REC

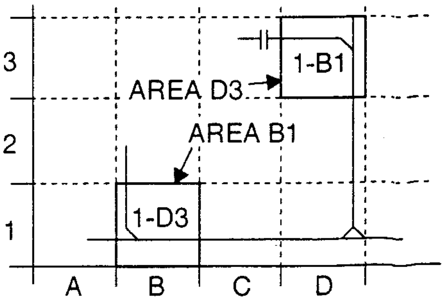
7. Voltage indications for PLAY and REC modes on the Schematics are as shown below:


①
②
③
5.0
5.0
(2.5)
PLAY mode
REC mode
The same voltage for both PLAY & REC modes
Indicates that the voltage is not consistent here.

Unit: Volts

8. How to read converged lines

1-D3
Distinction Area
Line Number
(1 to 3 digits)
Examples:
1. "1-D3" means that line number "1" goes to area "D3".
2. "1-B1" means that line number "1" goes to area "B1".



9. Test Point Information

⦶ : Indicates a test point with a jumper wire across a hole in the PCB.

▭→ : Used to indicate a test point with a component lead on foil side.

▨ : Used to indicate a test point with no test pin.

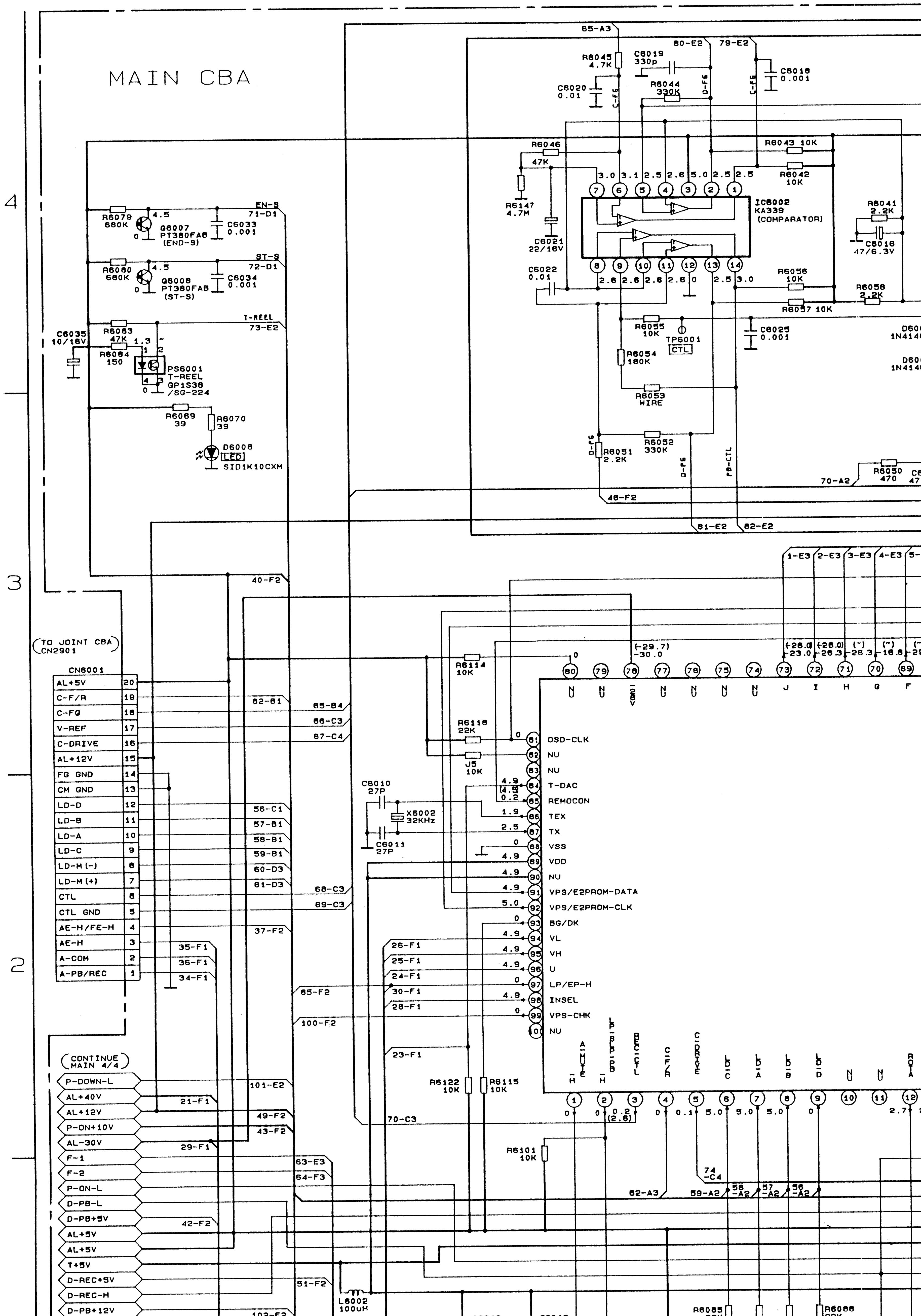
● : Used to indicate a test point with a test pin.

Main 1/4 Schematic Diagram

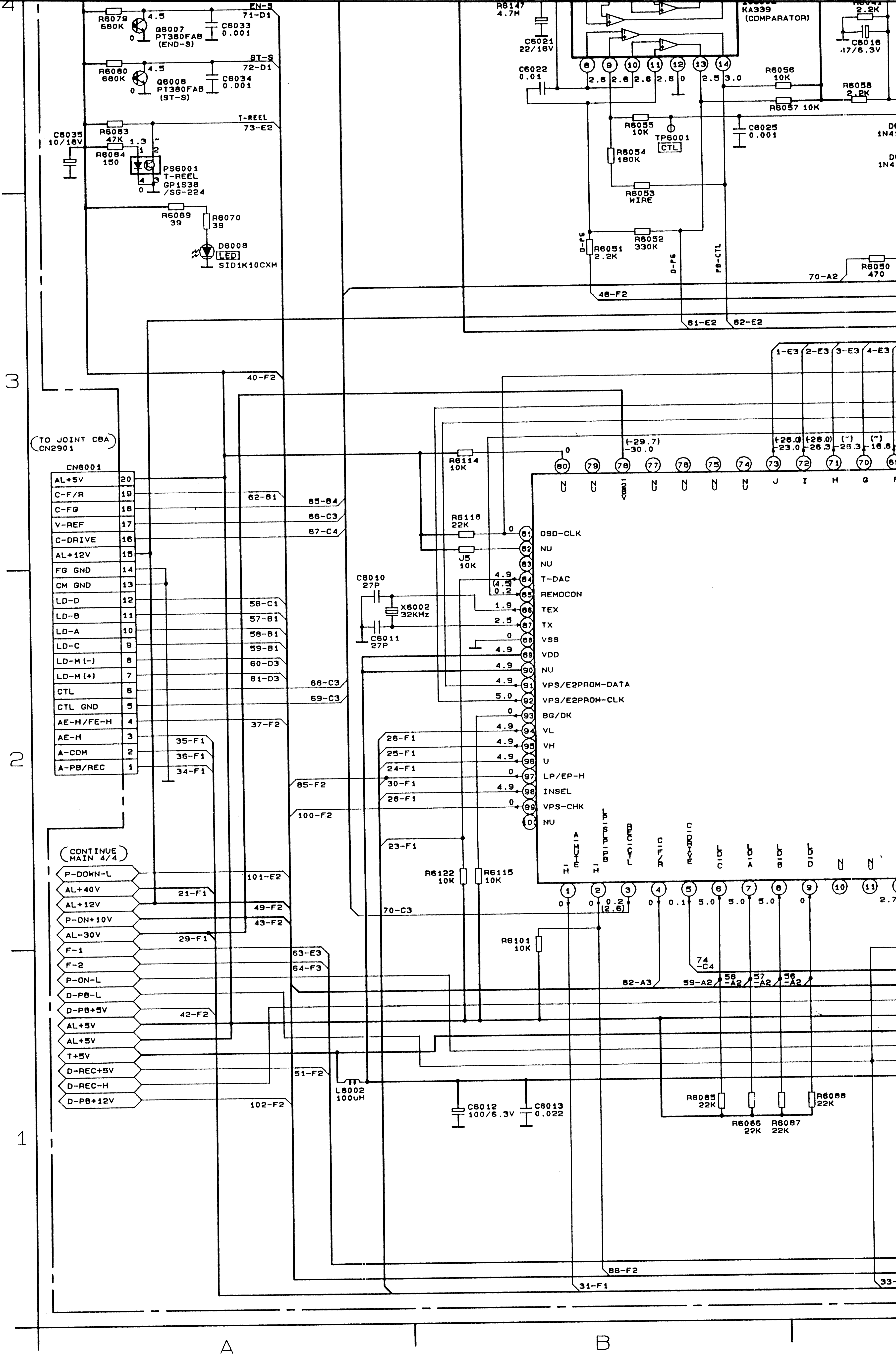
The following table shows the difference between Type A and B of Remote Control Unit.

	Maker No.	Remote Sensor CBA (MCV-D)	Marking of 27N on the surface of the unit.
Type A	HC-278N	Used	Yes
Type B	PIC-12042LF	Not Used	No

Note: Remote Control Unit RS6001
mounted on Remote Sensor CBA (
mounted on Main CBA (MCV-A). (
Sensor CBA's table in the parts list
remote sensor PCB. Type A and B
same Main CBA (MCV-A).



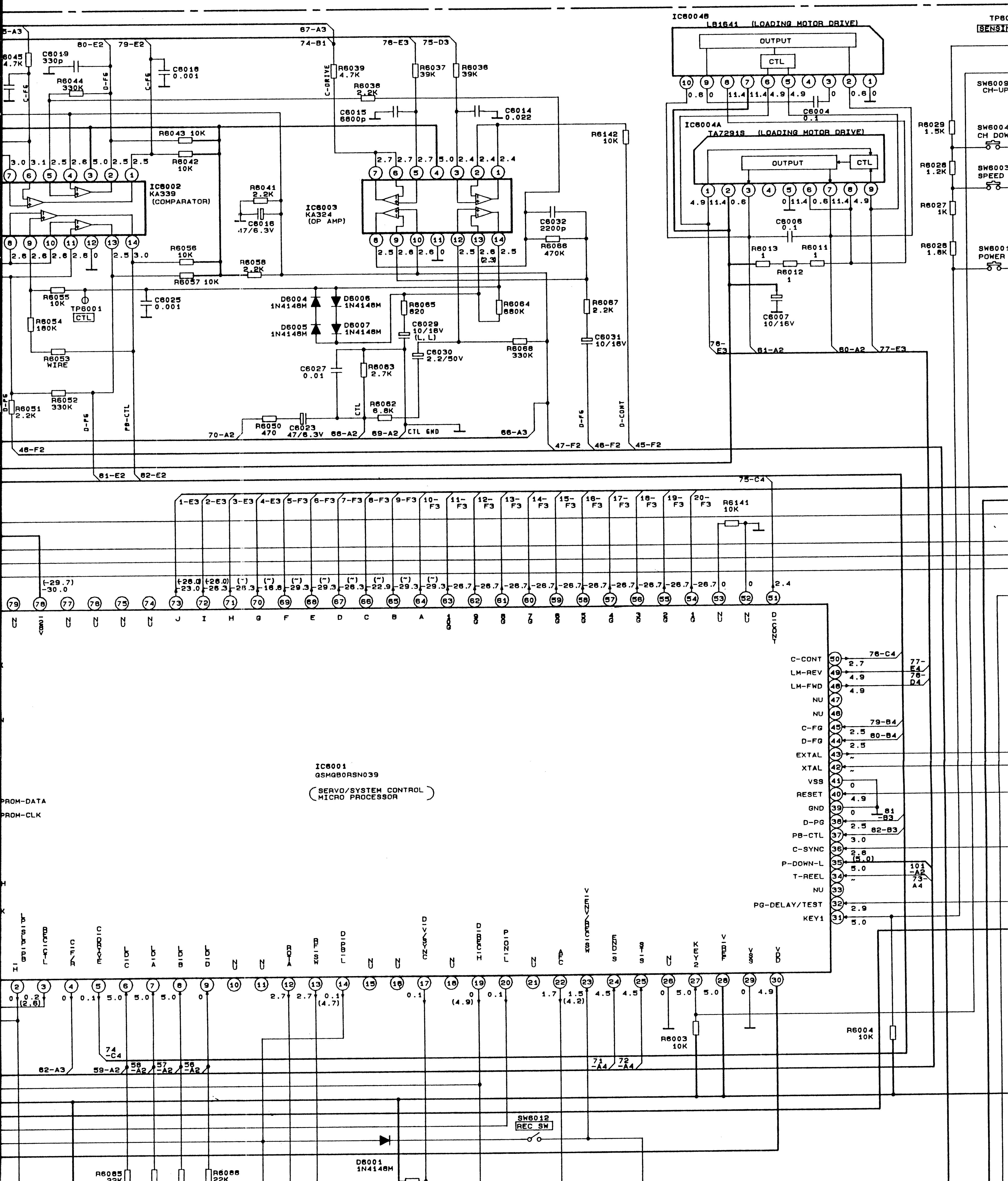
MAIN CBA
4
3
2
IC6002 KA339 (COMPARATOR)
Q6007 PT380FAB (END-S)
Q6008 PT380FAB (ST-S)
PS6001 T-REEL GP1S38 /SG-224
D6008 LED SID1K10CXM
TP6001 CTL
X6002 32KHz
L6002 100uH
(TO JOINT CBA CN2901)
CN6001
AL+5V
C-F/R
C-FG
V-REF
C-DRIVE
AL+12V
FG GND
CM GND
LD-D
LD-B
LD-A
LD-C
LD-M(-)
LD-M(+)
CTL
CTL GND
AE-H/FE-H
AE-H
A-COM
A-PB/REC
(CONTINUE MAIN 4/4)
P-DOWN-L
AL+40V
AL+12V
P-ON+10V
AL-30V
F-1
F-2
P-ON-L
D-PB-L
D-PB+5V
AL+5V
AL+5V
T+5V
D-REC+5V
D-REC-H
D-PB+12V
OSD-CLK
NU
NU
T-DAC
REMOCON
TEX
TX
VSS
VDD
NU
VPS/E2PROM-DATA
VPS/E2PROM-CLK
BG/DK
VL
VH
U
LP/EP-H
INSEL
VPS-CHK
NU
EN-S
ST-S
T-REEL
R6079 680K
R6080 680K
R6083 47K
R6084 150
R6069 39
R6070 39
C6033 0.001
C6034 0.001
C6035 10/16V
R6045 4.7K
C6019 330p
C6020 0.01
R6044 330K
C6018 0.001
R6046 47K
R6147 4.7M
C6021 22/16V
C6022 0.01
R6043 10K
R6042 10K
R6041 2.2K
C6016 47/6.3V
R6056 10K
R6058 2.2K
R6057 10K
R6055 10K
C6025 0.001
R6054 180K
R6053 WIRE
R6052 330K
R6051 2.2K
R6050 470
R6114 10K
R6118 22K
J5 10K
C6010 27P
C6011 27P
R6122 10K
R6115 10K
R6101 10K
R6085
R6088

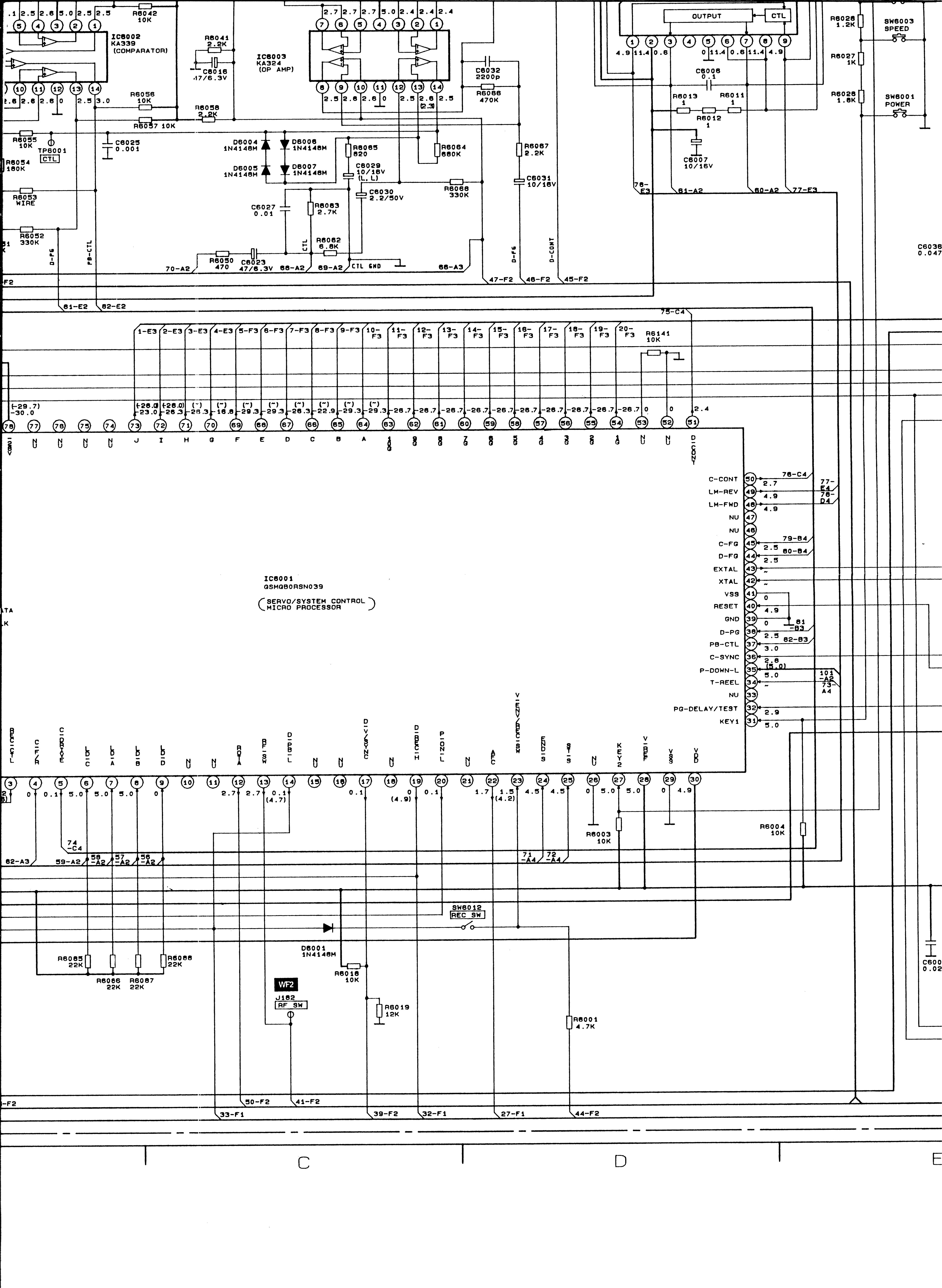


R6079 680K
Q6007 PT380FAB (END-S)
C6033 0.001
EN-S 71-D1
R6080 680K
Q6008 PT380FAB (ST-S)
C6034 0.001
ST-S 72-D1
T-REEL 73-E2
C6035 10/16V
R6083 47K
R6084 150
PS6001 T-REEL GP1S38 /SG-224
R6069 39
R6070 39
D6008 LED SID1K10CXM
R6147 4.7M
C6021 22/16V
C6022 0.01
KA339 (COMPARATOR)
R6056 10K
R6057 10K
R6058 2.2K
C6016 47/6.3V
R6055 10K
TP6001 CTL
C6025 0.001
R6054 180K
R6053 WIRE
R6051 2.2K
R6052 330K
D-FG
PB-CTL
R6050 470
70-A2
48-F2
81-E2
82-E2
1-E3
2-E3
3-E3
4-E3
40-F2
TO JOINT CBA CN2901
CN6001
AL+5V 20
C-F/R 19
C-FG 18
V-REF 17
C-DRIVE 16
AL+12V 15
FG GND 14
CM GND 13
LD-D 12
LD-B 11
LD-A 10
LD-C 9
LD-M(-) 8
LD-M(+) 7
CTL 6
CTL GND 5
AE-H/FE-H 4
AE-H 3
A-COM 2
A-PB/REC 1
82-B1
65-B4
66-C3
67-C4
56-C1
57-B1
58-B1
59-B1
60-D3
61-D3
68-C3
69-C3
37-F2
35-F1
36-F1
34-F1
85-F2
100-F2
R6114 10K
R6116 22K
J5 10K
C6010 27P
X6002 32KHz
C6011 27P
(-29.7) -30.0
(-26.0) -23.0
(-26.0) -26.3
(-) -26.3
(-) -16.8
OSD-CLK
NU
T-DAC
REMOCON
TEX
TX
VSS
VDD
VPS/E2PROM-DATA
VPS/E2PROM-CLK
BG/DK
VL
VH
U
LP/EP-H
INSEL
VPS-CHK
26-F1
25-F1
24-F1
30-F1
28-F1
23-F1
R6122 10K
R6115 10K
A-MUTE-H
D-PB-H
REC-CTL
C-F/R
C-DRIVE
LD-C
LD-A
LD-B
LD-D
70-C3
R6101 10K
74-C4
62-A3
59-A2
58-A2
57-A2
56-A2
CONTINUE MAIN 4/4
P-DOWN-L
AL+40V
AL+12V
P-ON+10V
AL-30V
F-1
F-2
P-ON-L
D-PB-L
D-PB+5V
AL+5V
AL+5V
T+5V
D-REC+5V
D-REC-H
D-PB+12V
101-E2
21-F1
49-F2
43-F2
29-F1
63-E3
64-F3
42-F2
51-F2
102-F2
L6002 100uH
C6012 100/6.3V
C6013 0.022
R6085 22K
R6086 22K
R6087 22K
R6088 22K
86-F2
31-F1
4
3
2
1
A
B

of 27N rface of the unit.	
Yes	
No	

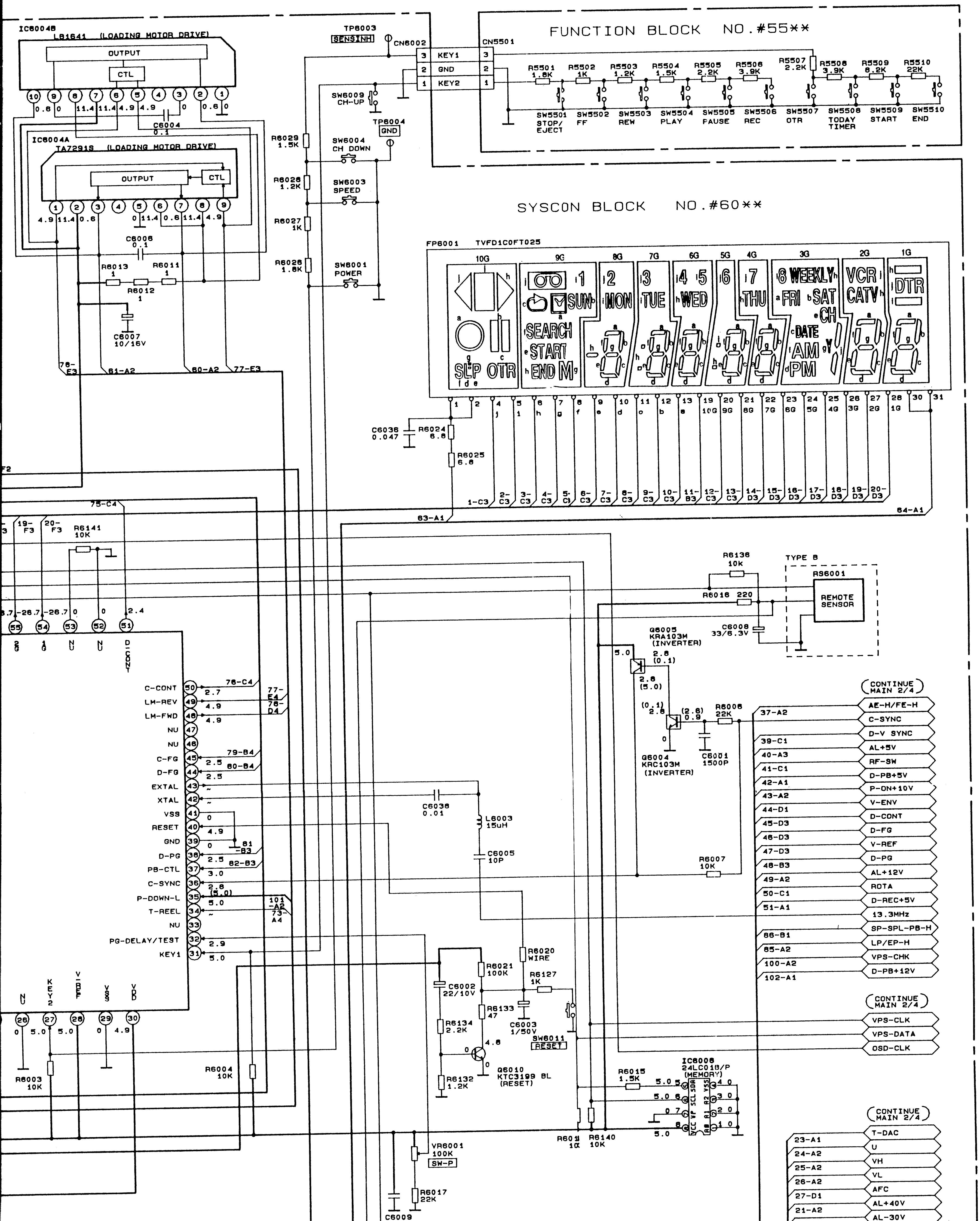
Note: Remote Control Unit RS6001 has two types; Type A to be mounted on Remote Sensor CBA (MCV-D) and Type B to be directly mounted on Main CBA (MCV-A). (Type A is included in Remote Sensor CBA's table in the parts list.) Type B does not employ a remote sensor PCB. Type A and B are interchangeable for the same Main CBA (MCV-A).

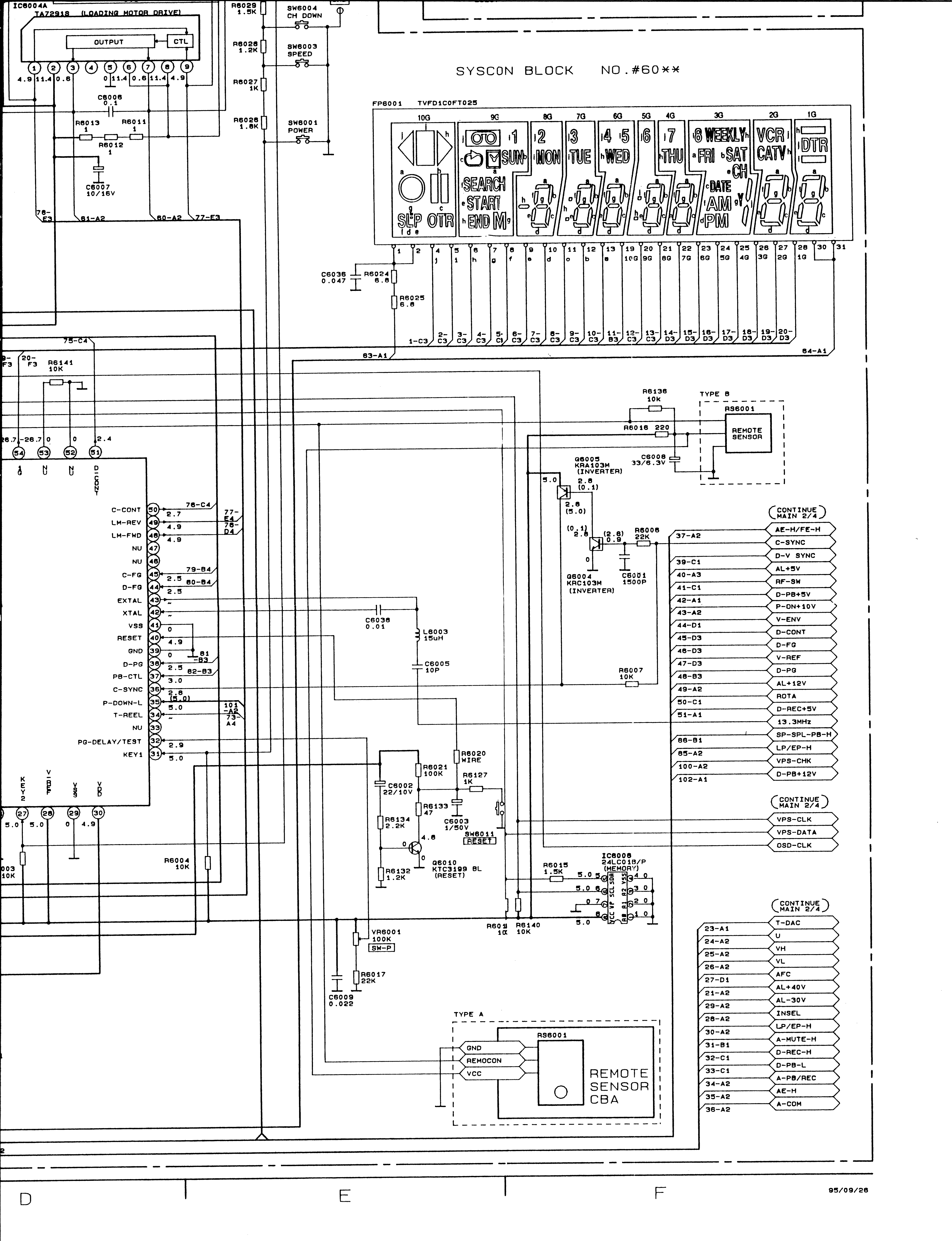

IC6004B
LB1641 (LOADING MOTOR DRIVE)
OUTPUT
CTL
IC6004A
TA7291S (LOADING MOTOR DRIVE)
IC6002
KA339
(COMPARATOR)
IC6003
KA324
(OP AMP)
IC6001
QSMQB0RSN039
(SERVO/SYSTEM CONTROL MICRO PROCESSOR)
TP6001
CTL
SW6009
CH-UP
SW6004
CH DOWN
SW6003
SPEED
SW6001
POWER
SW6012
REC SW
D6001
1N4148M
D6004
1N4148M
D6005
1N4148M
D6006
1N4148M
D6007
1N4148M
C-CONT
LM-REV
LM-FWD
NU
C-FG
D-FG
EXTAL
XTAL
VSS
RESET
GND
D-PG
PB-CTL
C-SYNC
P-DOWN-L
T-REEL
PG-DELAY/TEST
KEY1
PROM-DATA
PROM-CLK
C-DRIVE
D-CONT
CTL GND
R6141
10K
R6004
10K
R6003
10K


IC6002
KA339
(COMPARATOR)
IC6003
KA324
(OP AMP)
IC6001
GSMQB0RSN039
(SERVO/SYSTEM CONTROL MICRO PROCESSOR)
OUTPUT
CTL
R6042 10K
R6041 2.2K
C6016 47/6.3V
R6056 10K
R6058 2.2K
R6057 10K
R6055 10K
TP6001 CTL
C6025 0.001
R6054 180K
R6053 WIRE
R6052 330K
D6004 1N4148M
D6005 1N4148M
D6006 1N4148M
D6007 1N4148M
R6065 820
C6029 10/16V (L.L)
C6030 2.2/50V
C6027 0.01
R6063 2.7K
R6062 6.8K
R6050 470
C6023 47/6.3V
C6032 2200P
R6066 470K
R6064 680K
R6068 330K
R6067 2.2K
C6031 10/16V
C6006 0.1
R6013 1
R6011 1
R6012 1
C6007 10/16V
R6028 1.2K
R6027 1K
R6026 1.8K
SW6003 SPEED
SW6001 POWER
C6036 0.047
R6141 10K
C-CONT
LM-REV
LM-FWD
NU
C-FG
D-FG
EXTAL
XTAL
VSS
RESET
GND
D-PG
PB-CTL
C-SYNC
P-DOWN-L
T-REEL
PG-DELAY/TEST
KEY1
R6003 10K
R6004 10K
SW6012 REC SW
D6001 1N4148M
R6016 10K
R6019 12K
R6001 4.7K
R6085 22K
R6086 22K
R6087 22K
R6088 22K
WF2
J182 RF SW
CTL GND
D-FG
PB-CTL
D-CONT
70-A2
68-A2
69-A2
66-A3
47-F2
46-F2
45-F2
61-E2
62-E2
75-C4
76-C4
77-E4
78-D4
79-B4
80-B4
81-B3
82-B3
101-A2
73-A4
74-C4
62-A3
59-A2
58-A2
57-A2
56-A2
71-A4
72-A4
50-F2
41-F2
33-F1
39-F2
32-F1
27-F1
44-F2
76-E3
61-A2
60-A2
77-E3
C
D
E

Comparison Chart of Models and Marks

MODEL	MARK
9A-1011	A
9A-1211	B


FUNCTION BLOCK NO.#55**
SYSCON BLOCK NO.#60**
IC6004B
LB1641 (LOADING MOTOR DRIVE)
OUTPUT
CTL
C6004 0.1
IC6004A
TA7291S (LOADING MOTOR DRIVE)
C6006 0.1
R6013 1
R6011 1
R6012 1
C6007 10/16V
TP6003 SENSINH
CN6002
CN5501
KEY1
GND
KEY2
SW6009 CH-UP
TP6004 GND
SW6004 CH DOWN
SW6003 SPEED
SW6001 POWER
R6029 1.5K
R6026 1.2K
R6027 1K
R6028 1.8K
R5501 1.8K
R5502 1K
R5503 1.2K
R5504 1.5K
R5505 2.2K
R5506 3.9K
R5507 2.2K
R5508 3.9K
R5509 8.2K
R5510 22K
SW5501 STOP/EJECT
SW5502 FF
SW5503 REW
SW5504 PLAY
SW5505 PAUSE
SW5506 REC
SW5507 OTR
SW5508 TODAY TIMER
SW5509 START
SW5510 END
FP6001 TVFD1C0FT025
10G 9G 8G 7G 6G 5G 4G 3G 2G 1G
SUN MON TUE WED THU WEEKLY FRI SAT CH DATE AM PM VCR CATV DTR
SEARCH START END M SLP OTR
C6036 0.047
R6024 6.8
R6025 6.8
63-A1
64-A1
75-C4
R6141 10K
C-CONT
LM-REV
LM-FWD
NU
C-FG
D-FG
EXTAL
XTAL
VSS
RESET
GND
D-PG
PB-CTL
C-SYNC
P-DOWN-L
T-REEL
PG-DELAY/TEST
KEY1
KEY2
V-REF
VDD
R6003 10K
R6004 10K
C6038 0.01
L6003 15uH
C6005 10P
R6020 WIRE
R6021 100K
R6127 1K
C6002 22/10V
R6133 47
C6003 1/50V
R6134 2.2K
R6132 1.2K
Q6010 KTC3199 BL (RESET)
SW6011 RESET
VR6001 100K SW-P
R6017 22K
C6009
R6136 10k
R6016 220
TYPE B
RS6001 REMOTE SENSOR
C6008 33/6.3V
Q6005 KRA103M (INVERTER)
Q6004 KRC103M (INVERTER)
R6006 22K
C6001 1500P
R6007 10K
R6015 1.5K
IC6008 24LC016/P (MEMORY)
R6011 1Ω
R6140 10K
CONTINUE MAIN 2/4
AE-H/FE-H
C-SYNC
D-V SYNC
AL+5V
RF-SW
D-PB+5V
P-ON+10V
V-ENV
D-CONT
D-FG
V-REF
D-PG
AL+12V
ROTA
D-REC+5V
13.3MHz
SP-SPL-PB-H
LP/EP-H
VPS-CHK
D-PB+12V
VPS-CLK
VPS-DATA
OSD-CLK
T-DAC
U
VH
VL
AFC
AL+40V
AL-30V
37-A2 39-C1 40-A3 41-C1 42-A1 43-A2 44-D1 45-D3 46-D3 47-D3 48-B3 49-A2 50-C1 51-A1 86-B1 85-A2 100-A2 102-A1
23-A1 24-A2 25-A2 26-A2 27-D1 21-A2


SYSCON BLOCK NO.#60**
IC6004A
TA7291S (LOADING MOTOR DRIVE)
OUTPUT
CTL
C6006 0.1
R6013 1
R6011 1
R6012 1
C6007 10/16V
R6029 1.5K
R6026 1.2K
R6027 1K
R6028 1.8K
SW6004 CH DOWN
SW6003 SPEED
SW6001 POWER
FP6001 TVFD1C0FT025
10G 9G 8G 7G 6G 5G 4G 3G 2G 1G
SUN MON TUE WED THU FRI SAT WEEKLY VCR CATV DTR CH DATE AM PM
SEARCH START END SLP OTR
C6036 0.047
R6024 6.8
R6025 6.8
63-A1
64-A1
75-C4
R6141 10K
R6136 10K
R6016 220
TYPE B
RS6001
REMOTE SENSOR
C6008 33/6.3V
Q6005 KRA103M (INVERTER)
Q6004 KRC103M (INVERTER)
C6001 1500P
R6006 22K
R6007 10K
C-CONT
LM-REV
LM-FWD
NU
C-FG
D-FG
EXTAL
XTAL
VSS
RESET
GND
D-PG
PB-CTL
C-SYNC
P-DOWN-L
T-REEL
PG-DELAY/TEST
KEY1
C6038 0.01
L6003 15uH
C6005 10P
R6020 WIRE
R6021 100K
C6002 22/10V
R6127 1K
R6133 47
C6003 1/50V
SW6011 RESET
R6134 2.2K
R6132 1.2K
Q6010 KTC3199 BL (RESET)
R6004 10K
R6015 1.5K
IC6006 24LC016/P (MEMORY)
R6011 1Ω
R6140 10K
VR6001 100K SW-P
R6017 22K
C6009 0.022
TYPE A
RS6001
GND
REMOCON
VCC
REMOTE SENSOR CBA
CONTINUE MAIN 2/4
AE-H/FE-H
C-SYNC
D-V SYNC
AL+5V
RF-SW
D-PB+5V
P-ON+10V
V-ENV
D-CONT
D-FG
V-REF
D-PG
AL+12V
ROTA
D-REC+5V
13.3MHz
SP-SPL-PB-H
LP/EP-H
VPS-CHK
D-PB+12V
CONTINUE MAIN 2/4
VPS-CLK
VPS-DATA
OSD-CLK
CONTINUE MAIN 2/4
T-DAC
U
VH
VL
AFC
AL+40V
AL-30V
INSEL
LP/EP-H
A-MUTE-H
D-REC-H
D-PB-L
A-PB/REC
AE-H
A-COM

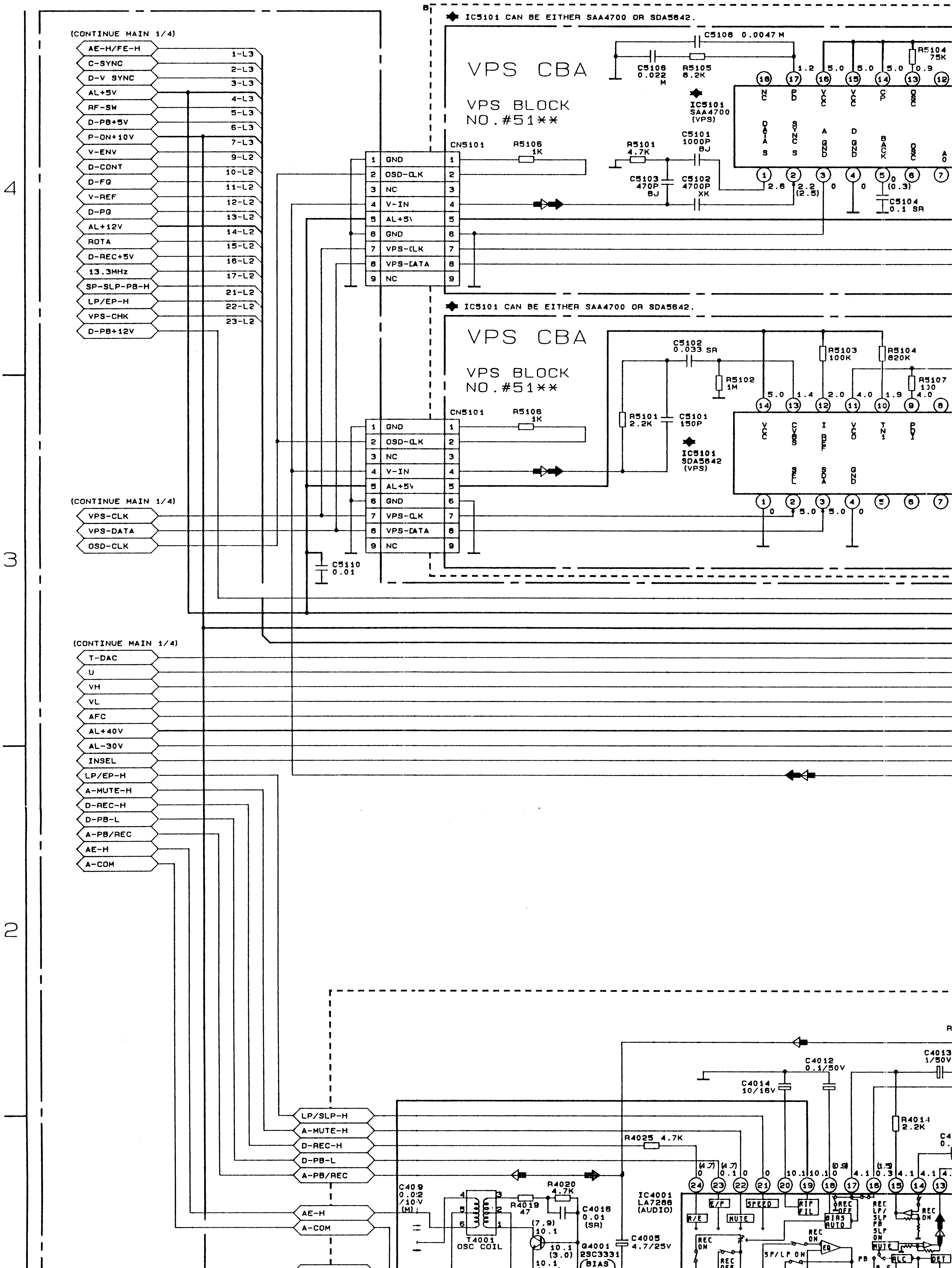
D E F

95/09/28

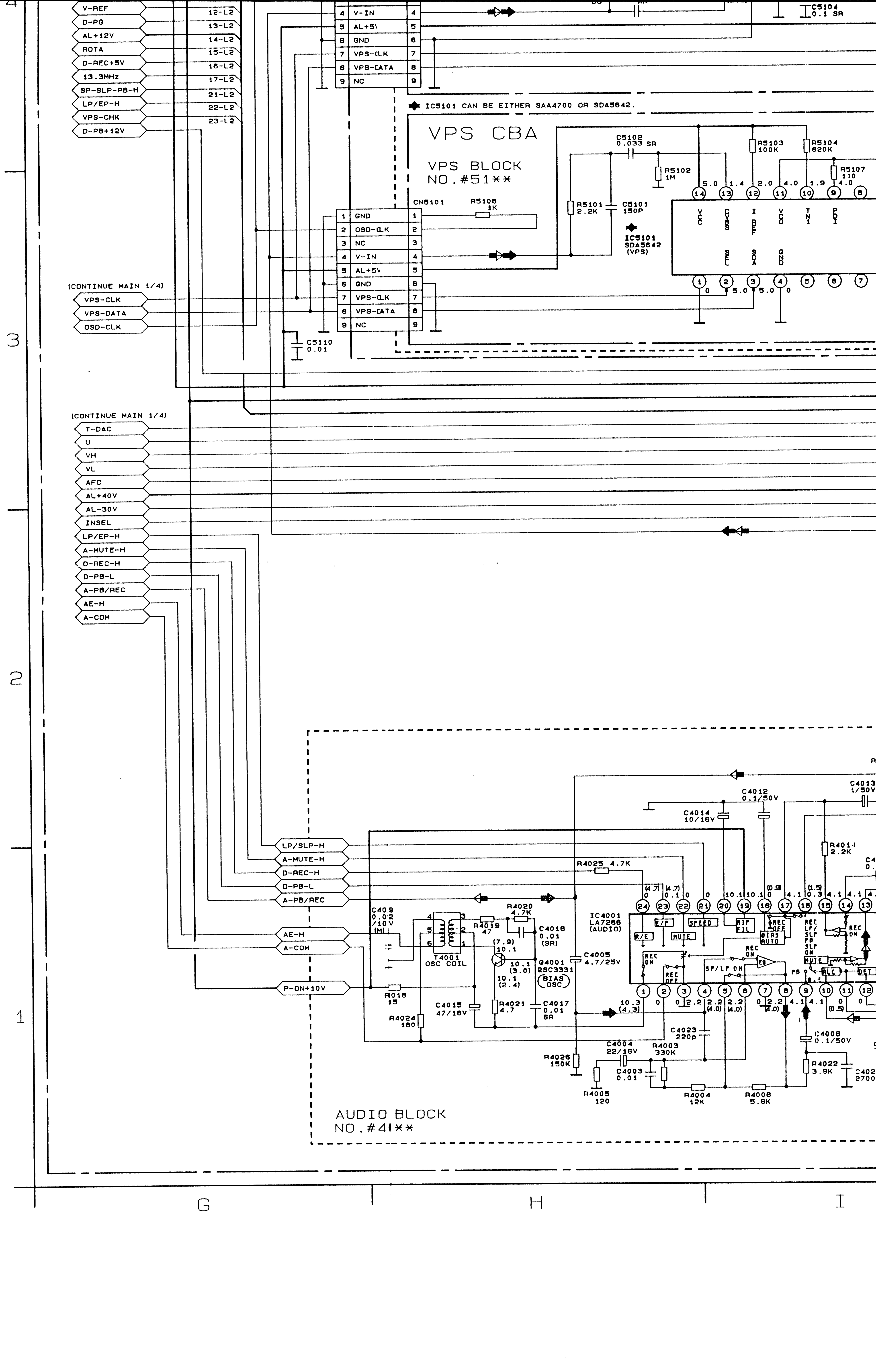
Main 2/4 Schematic Diagram

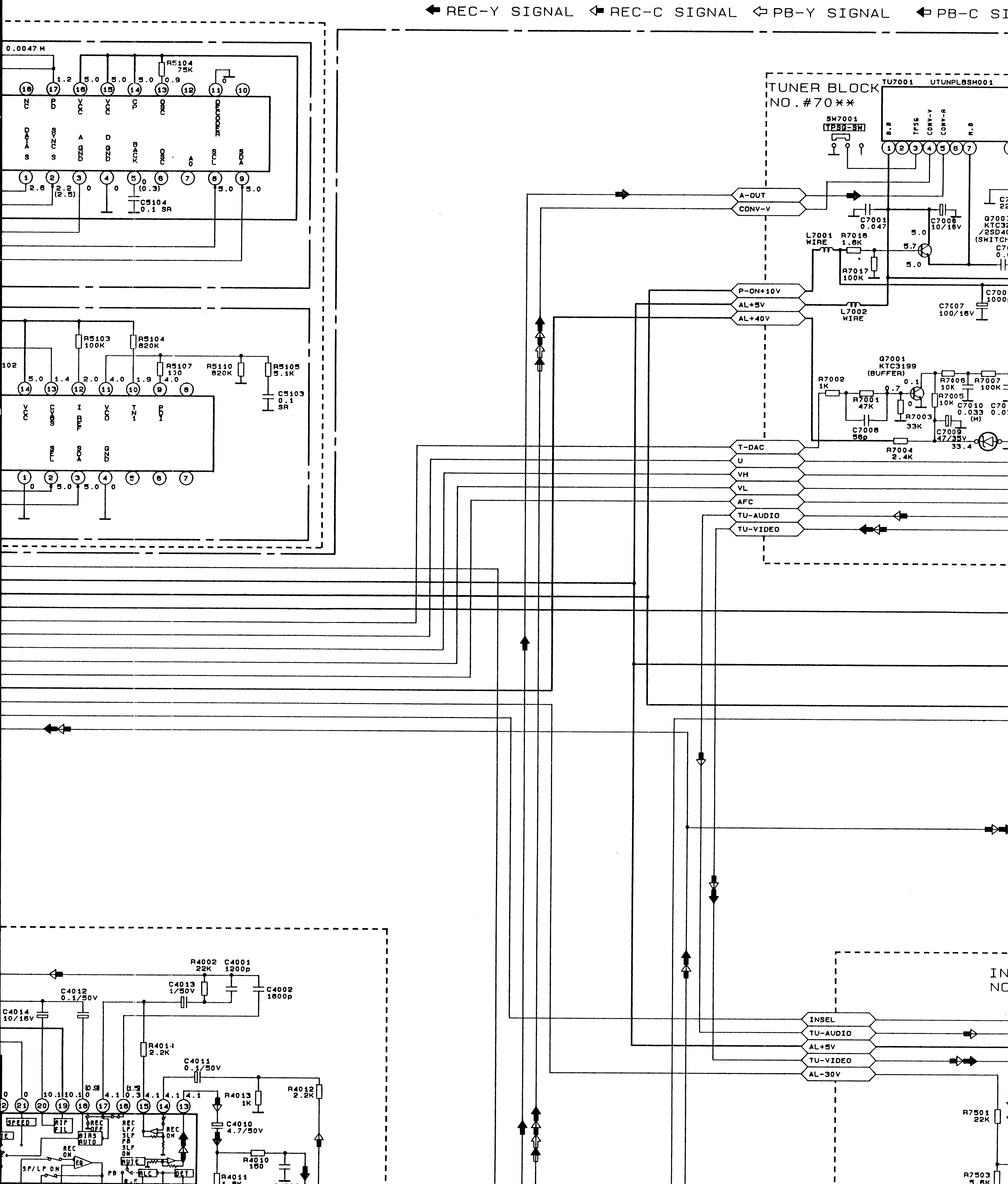
Comparison Chart of Models and Marks

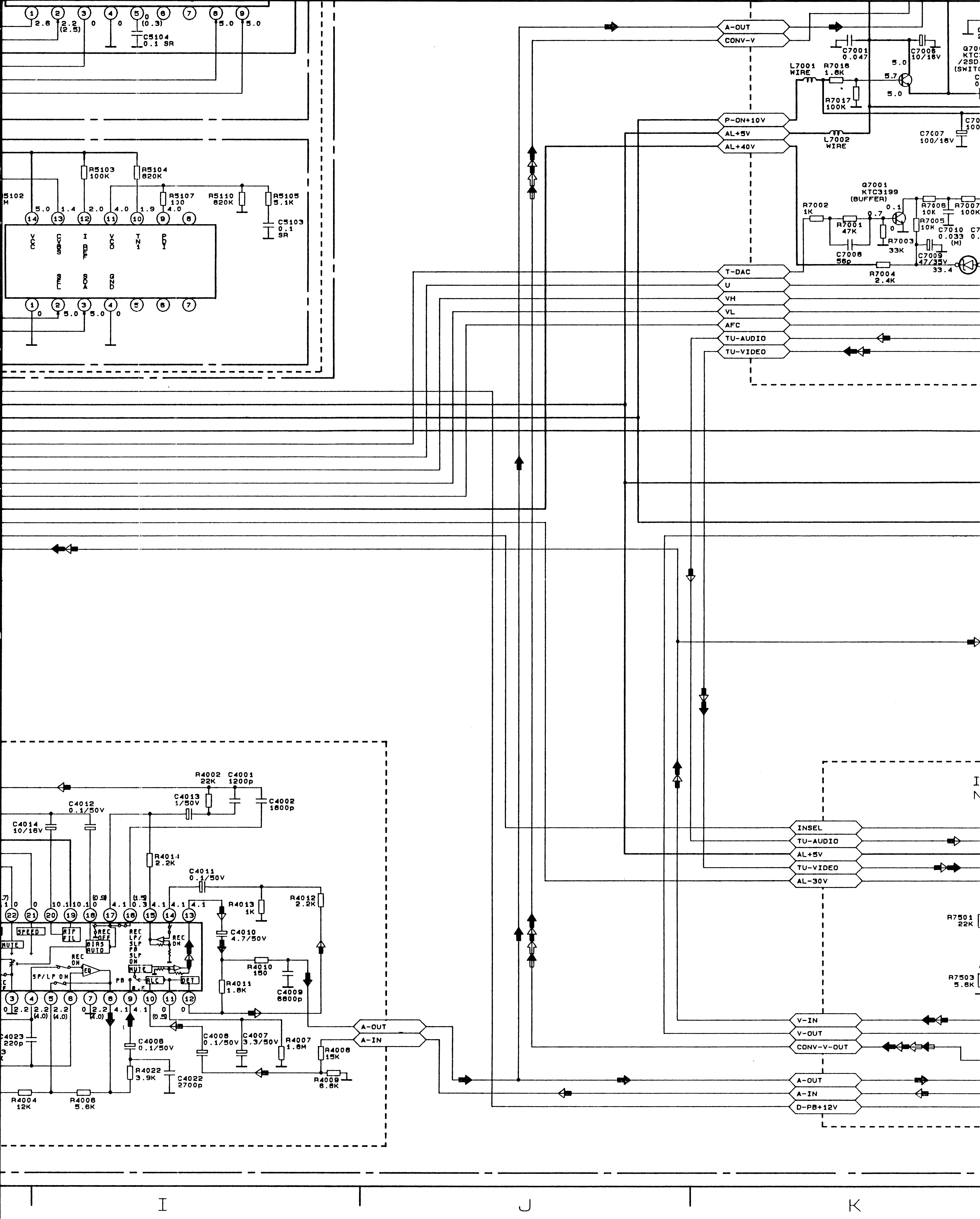
MODEL	MARK
9A-1011	A
9A-1211	B



4
3
2
(CONTINUE MAIN 1/4)
AE-H/FE-H
C-SYNC
D-V SYNC
AL+5V
RF-SW
D-PB+5V
P-ON+10V
V-ENV
D-CONT
D-FG
V-REF
D-PG
AL+12V
ROTA
D-REC+5V
13.3MHz
SP-SLP-PB-H
LP/EP-H
VPS-CHK
D-PB+12V
1-L3
2-L3
3-L3
4-L3
5-L3
6-L3
7-L3
9-L2
10-L2
11-L2
12-L2
13-L2
14-L2
15-L2
16-L2
17-L2
21-L2
22-L2
23-L2
IC5101 CAN BE EITHER SAA4700 OR SDA5642.
VPS CBA
VPS BLOCK
NO.#51**
CN5101
GND
OSD-CLK
NC
V-IN
AL+5V
GND
VPS-CLK
VPS-DATA
NC
R5106 1K
R5101 4.7K
C5101 1000P BJ
C5103 470P BJ
C5102 4700P XK
C5106 0.022 M
R5105 8.2K
C5108 0.0047 M
R5104 75K
C5104 0.1 SR
IC5101 SAA4700 (VPS)
NC
PD
VCC
VCC
CP
OSC
DATA S
SYNC S
A GND
D GND
BACK
OSC
C5102 0.033 SR
R5102 1M
R5103 100K
R5104 820K
R5107 100
R5101 2.2K
C5101 150P
IC5101 SDA5642 (VPS)
VCC
CVBS
I REF
VCO
TN1
PD1
SEL
SDA
GND
(CONTINUE MAIN 1/4)
VPS-CLK
VPS-DATA
OSD-CLK
C5110 0.01
(CONTINUE MAIN 1/4)
T-DAC
U
VH
VL
AFC
AL+40V
AL-30V
INSEL
LP/EP-H
A-MUTE-H
D-REC-H
D-PB-L
A-PB/REC
AE-H
A-COM
LP/SLP-H
A-MUTE-H
D-REC-H
D-PB-L
A-PB/REC
AE-H
A-COM
C4012 0.1/50V
C4013 1/50V
C4014 10/16V
R4014 2.2K
R4025 4.7K
R4020 4.7K
R4019 47
C409 0.02 /10V (M)
C4016 0.01 (SR)
T4001 OSC COIL
Q4001 2SC3331 (BIAS)
C4005 4.7/25V
IC4001 LA7286 (AUDIO)
R/E
E/P
MUTE
SPEED
RIP FIL
REC OFF
BIAS AUTO
REC ON
SP/LP ON
EQ
PB
ALC
DET
MUTE
REC LP/SLP PB
SLP ON

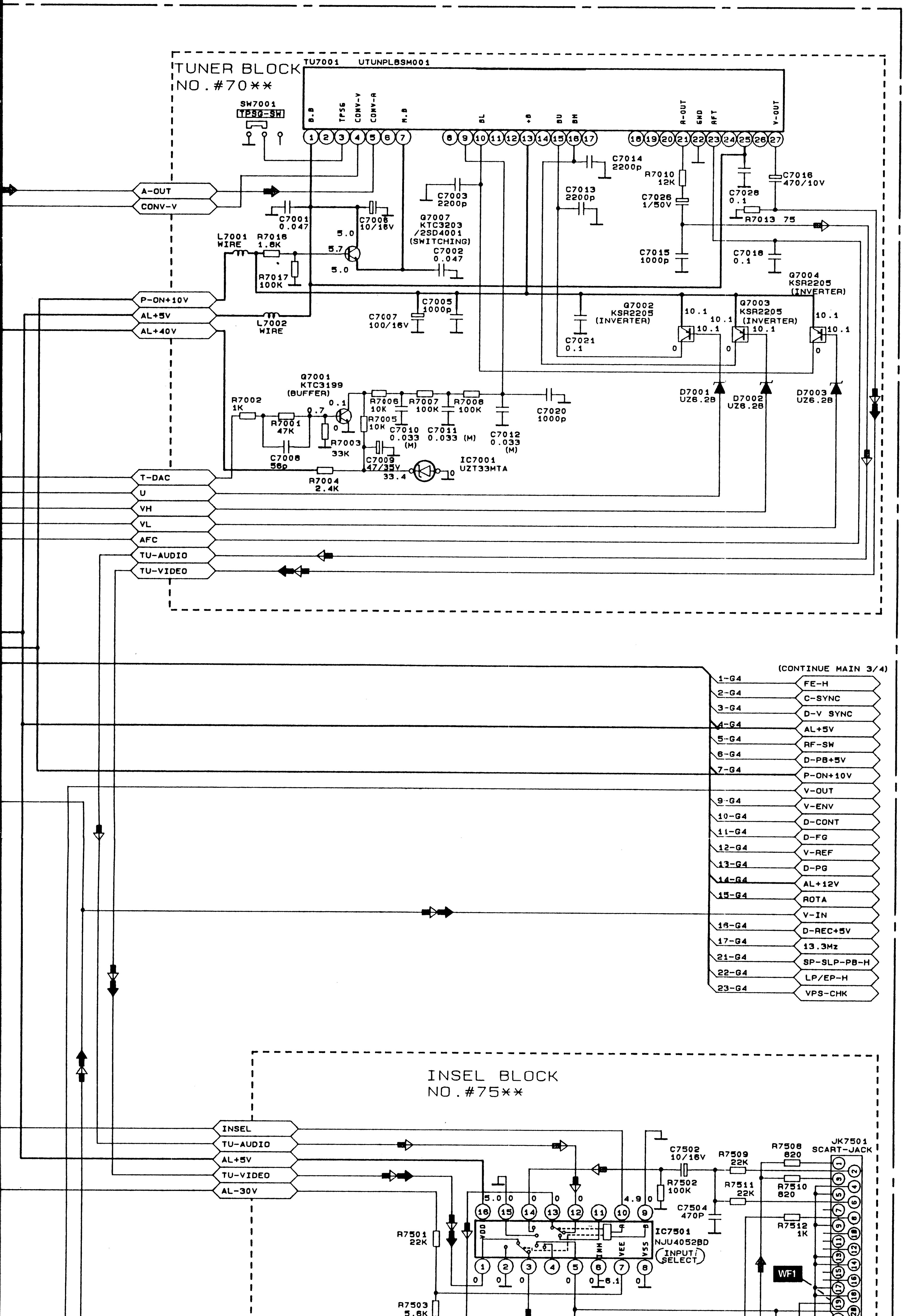

V-REF
D-PG
AL+12V
ROTA
D-REC+5V
13.3MHz
SP-SLP-PB-H
LP/EP-H
VPS-CHK
D-PB+12V
12-L2
13-L2
14-L2
15-L2
16-L2
17-L2
21-L2
22-L2
23-L2
4 V-IN 4
5 AL+5V 5
6 GND 6
7 VPS-CLK 7
8 VPS-DATA 8
9 NC 9
C5104
0.1 SR
IC5101 CAN BE EITHER SAA4700 OR SDA5642.
VPS CBA
VPS BLOCK
NO.#51**
C5102
0.033 SR
R5103
100K
R5104
820K
R5102
1M
R5107
100
CN5101
R5106
1K
R5101
2.2K
C5101
150P
IC5101
SDA5642
(VPS)
VCC
CVBS
IREF
VCO
TNI
PDI
SCL
SDA
GND
1 GND 1
2 OSD-CLK 2
3 NC 3
4 V-IN 4
5 AL+5V 5
6 GND 6
7 VPS-CLK 7
8 VPS-DATA 8
9 NC 9
(CONTINUE MAIN 1/4)
VPS-CLK
VPS-DATA
OSD-CLK
C5110
0.01
(CONTINUE MAIN 1/4)
T-DAC
U
VH
VL
AFC
AL+40V
AL-30V
INSEL
LP/EP-H
A-MUTE-H
D-REC-H
D-PB-L
A-PB/REC
AE-H
A-COM
LP/SLP-H
A-MUTE-H
D-REC-H
D-PB-L
A-PB/REC
AE-H
A-COM
P-ON+10V
C4012
0.1/50V
C4013
1/50V
C4014
10/16V
R4014
2.2K
R4025 4.7K
R4020
4.7K
C409
0.022
/10V
(M)
R4019
47
C4016
0.01
(SR)
T4001
OSC COIL
Q4001
2SC3331
BIAS
OSC
IC4001
LA7286
(AUDIO)
C4005
4.7/25V
R/E
E/P
MUTE
SPEED
RIP FIL
REC OFF
BIAS AUTO
REC ON
REC OFF
SP/LP ON
EQ
REC LP/SLP
PB SLP ON
MUTE
ALC
DET
R4018
15
R4024
180
C4015
47/16V
R4021
4.7
C4017
0.01
SR
C4023
220p
C4004
22/16V
R4003
330K
R4026
150K
C4003
0.01
R4005
120
R4004
12K
R4006
5.6K
C4008
0.1/50V
R4022
3.9K
AUDIO BLOCK
NO.#41**
G
H
I
1
2
3
4


REC-Y SIGNAL
REC-C SIGNAL
PB-Y SIGNAL
PB-C SI
TUNER BLOCK
NO.#70**
TU7001
UTUNPLBSM001
SW7001
TPSG-SH
B.B
TPSG
CONV-V
CONV-A
M.B
A-OUT
CONV-V
P-ON+10V
AL+5V
AL+40V
T-DAC
U
VH
VL
AFC
TU-AUDIO
TU-VIDEO
C7001 0.047
C7006 10/16V
L7001 WIRE
R7016 1.8K
R7017 100K
L7002 WIRE
C7007 100/16V
Q7001 KTC3199 (BUFFER)
R7002 1K
R7001 47K
R7003 33K
R7006 10K
R7007 100K
R7005 10K
C7010 0.033 (M)
C7008 56p
C7009 47/35V
R7004 2.4K
(SWITCH)
R5104 75K
C5104 0.1 SR
R5103 100K
R5104 820K
R5107 130
R5110 820K
R5105 5.1K
C5103 0.1 SR
0.0047M
NC
PD
VCC
CP
OSC
DECODER
DATA S
SYNC S
A GND
D GND
BACK
A0
SCL
SDA
CVBS
I REF
VCO
TN1
PDI
SEL
GND
INSEL
TU-AUDIO
AL+5V
TU-VIDEO
AL-30V
R7501 22K
R7503 5.6K
R4002 22K
C4001 1200p
C4013 1/50V
C4002 1800p
C4012 0.1/50V
C4014 10/16V
R4014 2.2K
C4011 0.1/50V
R4013 1K
R4012 2.2K
C4010 4.7/50V
R4010 150
R4011
SPEED
RIP FIL
REC OFF
BIAS AUTO
REC ON
SP/LP ON
EQ
PB
REC LP/SLP PB SLP ON MUTE
ALC
DET

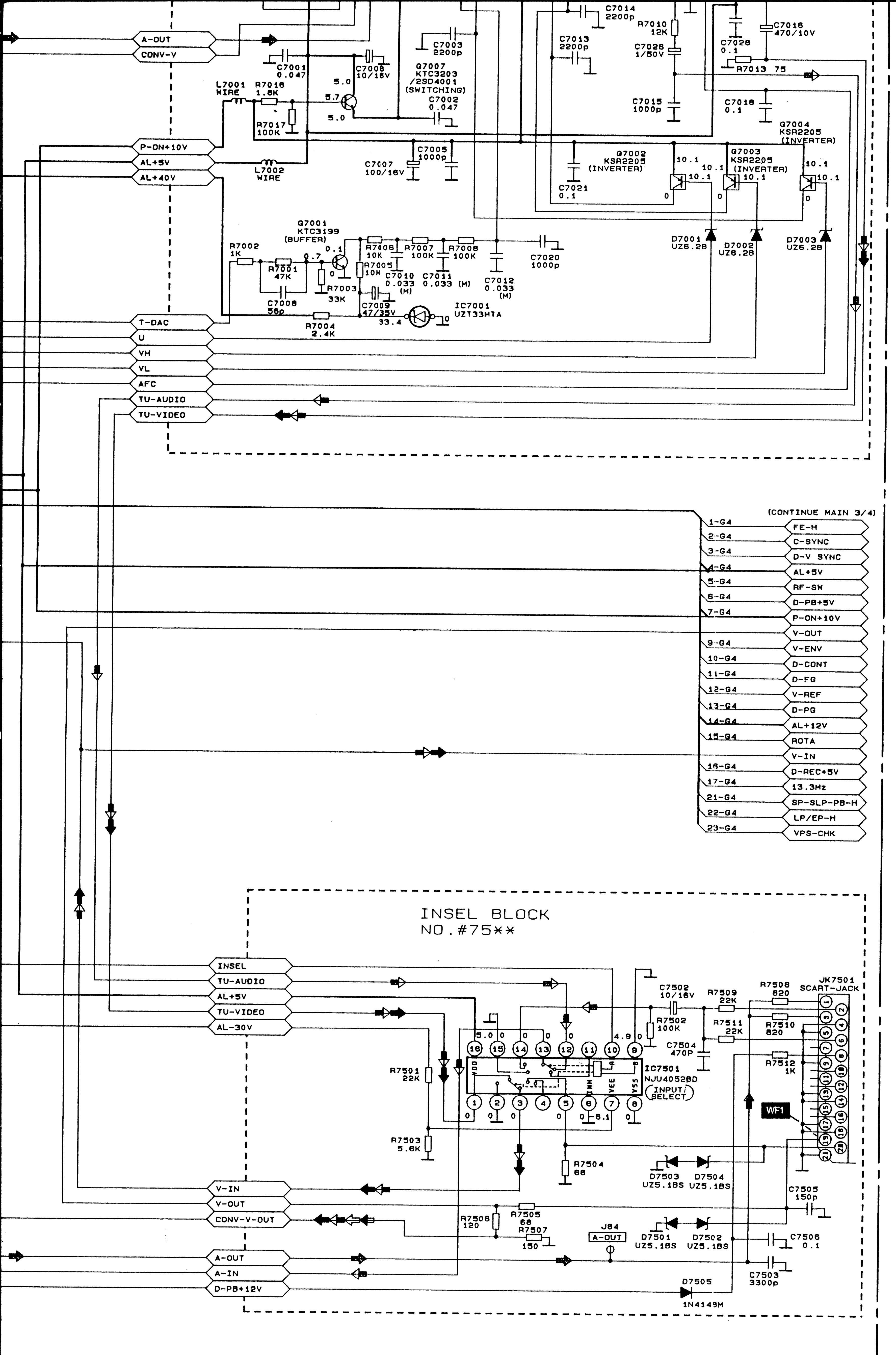


A-OUT
CONV-V
P-ON+10V
AL+5V
AL+40V
T-DAC
U
VH
VL
AFC
TU-AUDIO
TU-VIDEO
C7001
0.047
C7008
10/16V
L7001
WIRE
R7016
1.8K
R7017
100K
L7002
WIRE
C7007
100/16V
Q7001
KTC3199
(BUFFER)
R7002
1K
R7001
47K
C7008
56p
R7003
33K
R7006
10K
R7007
100K
R7005
10K
C7010
0.033
(M)
C7009
47/35V
R7004
2.4K
33.4
5.0
5.7
R5103
100K
R5104
820K
R5107
130
R5110
820K
R5105
5.1K
C5103
0.1
SR
C5104
0.1 SR
R5102
VCC
CVBS
IREF
VCO
TN1
PDI
SEL
SDA
GND
R4002
22K
C4001
1200p
C4013
1/50V
C4002
1800p
C4012
0.1/50V
C4014
10/16V
R4014
2.2K
C4011
0.1/50V
R4013
1K
R4012
2.2K
C4010
4.7/50V
R4010
150
R4011
1.8K
C4009
6800p
SPEED
RIP FIL
REC OFF
BIAS AUTO
REC LP/SLP PB SLP ON
REC ON
MUTE
EQ
SP/LP ON
ALC
DET
PB
C4023
220p
C4008
0.1/50V
C4007
3.3/50V
R4007
1.8M
R4008
15K
R4009
6.8K
C4006
0.1/50V
R4022
3.9K
C4022
2700p
R4004
12K
R4006
5.6K
A-OUT
A-IN
INSEL
TU-AUDIO
AL+5V
TU-VIDEO
AL-30V
R7501
22K
R7503
5.6K
V-IN
V-OUT
CONV-V-OUT
A-OUT
A-IN
D-PB+12V
I
J
K

EC-C SIGNAL ⇦ PB-Y SIGNAL ⇦ PB-C SIGNAL ⇦ REC-A SIGNAL ⇦ PB-A SIGNAL


TUNER BLOCK
NO.#70**
TU7001 UTUNPLBSM001
SW7001
TPSG-SW
B.B
TPSG
CONV-Y
CONV-A
M.B
BL
+B
BU
BH
A-OUT
GND
AFT
V-OUT
A-OUT
CONV-V
P-ON+10V
AL+5V
AL+40V
C7001
0.047
C7006
10/16V
L7001
WIRE
R7016
1.8K
R7017
100K
L7002
WIRE
Q7007
KTC3203
/2SD4001
(SWITCHING)
C7002
0.047
C7003
2200p
C7005
1000p
C7007
100/16V
C7014
2200p
C7013
2200p
R7010
12K
C7026
1/50V
C7015
1000p
C7028
0.1
C7016
470/10V
R7013 75
C7018
0.1
Q7004
KSR2205
(INVERTER)
Q7002
KSR2205
(INVERTER)
Q7003
KSR2205
(INVERTER)
C7021
0.1
D7001
UZ6.2B
D7002
UZ6.2B
D7003
UZ6.2B
Q7001
KTC3199
(BUFFER)
R7002
1K
R7001
47K
R7003
33K
C7008
56p
R7006
10K
R7005
10K
R7007
100K
R7008
100K
C7010
0.033
(M)
C7011
0.033 (M)
C7012
0.033
(M)
C7020
1000p
C7009
47/35V
IC7001
UZT33MTA
R7004
2.4K
T-DAC
U
VH
VL
AFC
TU-AUDIO
TU-VIDEO
(CONTINUE MAIN 3/4)
1-G4
FE-H
2-G4
C-SYNC
3-G4
D-V SYNC
4-G4
AL+5V
5-G4
RF-SW
6-G4
D-PB+5V
7-G4
P-ON+10V
V-OUT
9-G4
V-ENV
10-G4
D-CONT
11-G4
D-FG
12-G4
V-REF
13-G4
D-PG
14-G4
AL+12V
15-G4
ROTA
V-IN
16-G4
D-REC+5V
17-G4
13.3Mz
21-G4
SP-SLP-PB-H
22-G4
LP/EP-H
23-G4
VPS-CHK
INSEL BLOCK
NO.#75**
INSEL
TU-AUDIO
AL+5V
TU-VIDEO
AL-30V
C7502
10/16V
R7502
100K
C7504
470P
R7509
22K
R7511
22K
R7508
820
R7510
820
R7512
1K
JK7501
SCART-JACK
R7501
22K
R7503
5.6K
IC7501
NJU4052BD
(INPUT SELECT)
VDD
INH
VEE
VSS
WF1

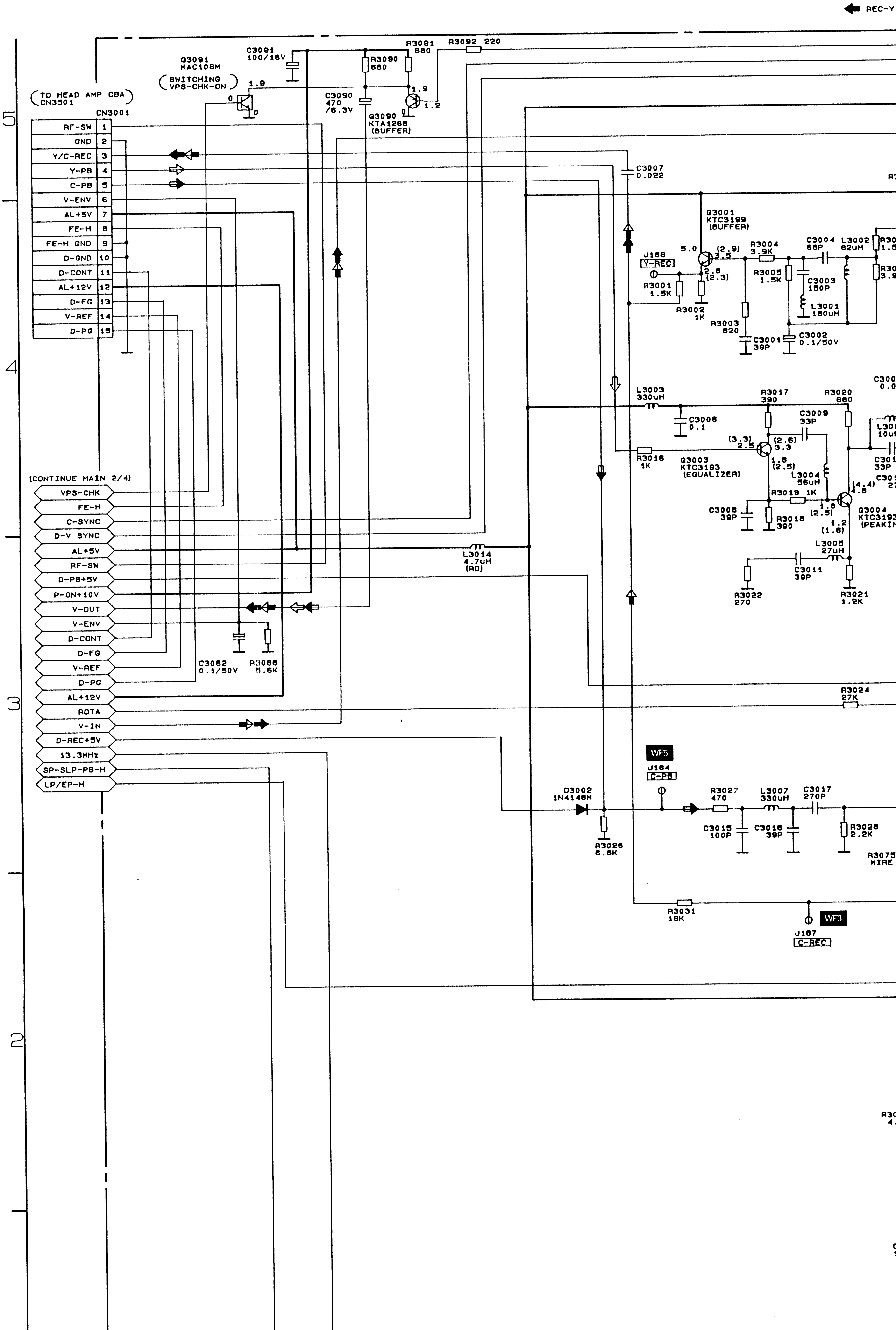
FUNAI V18265

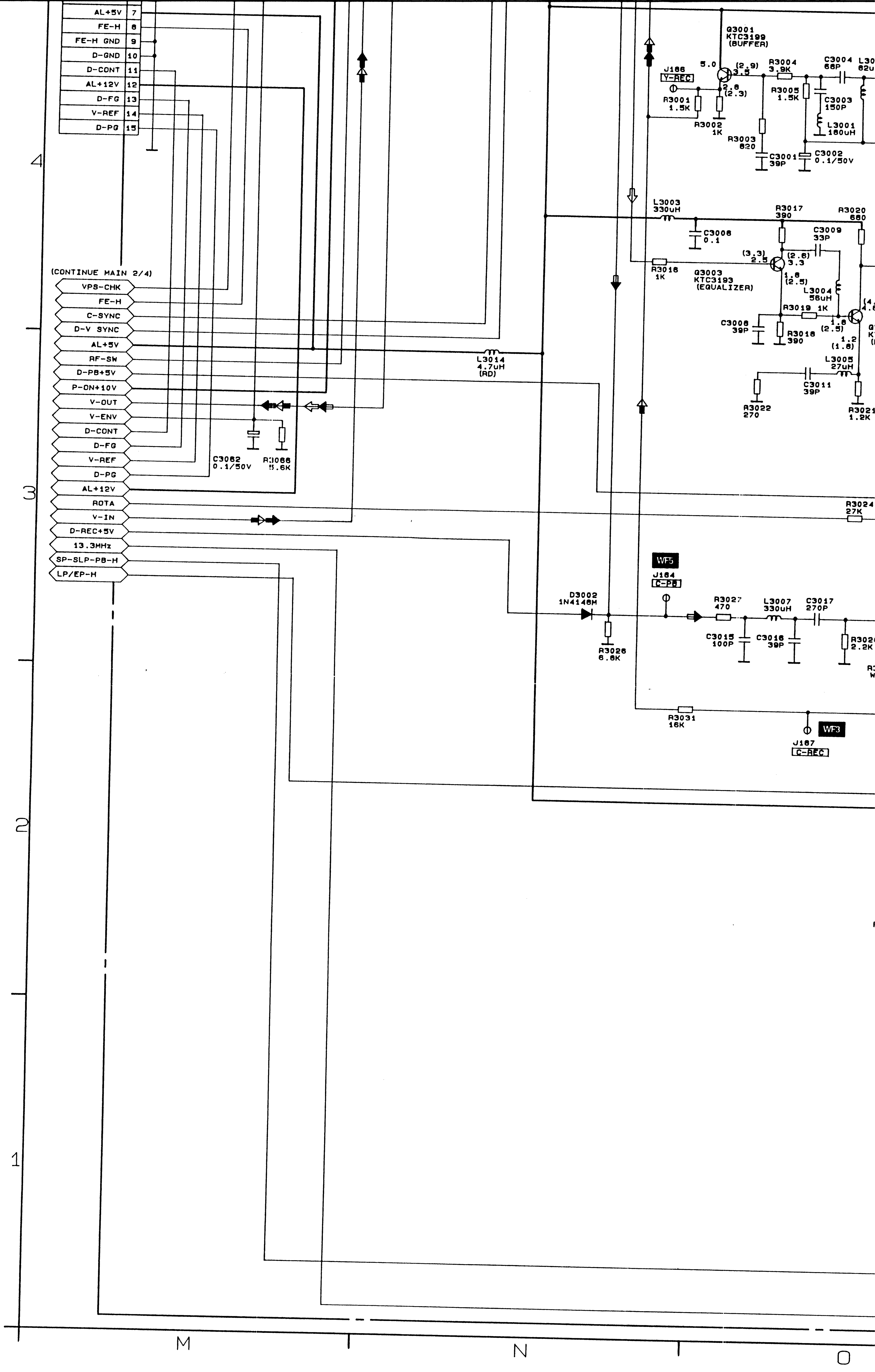

A-OUT
CONV-V
P-ON+10V
AL+5V
AL+40V
L7001 WIRE
R7016 1.8K
R7017 100K
C7001 0.047
C7006 10/16V
Q7007 KTC3203 /2SD4001 (SWITCHING)
C7003 2200p
C7002 0.047
5.0
5.7
5.0
L7002 WIRE
C7005 1000p
C7007 100/16V
C7014 2200p
C7013 2200p
R7010 12K
C7026 1/50V
C7015 1000p
C7028 0.1
C7016 470/10V
R7013 75
C7018 0.1
Q7004 KSR2205 (INVERTER)
Q7002 KSR2205 (INVERTER)
Q7003 KSR2205 (INVERTER)
C7021 0.1
10.1
D7001 UZ6.2B
D7002 UZ6.2B
D7003 UZ6.2B
Q7001 KTC3199 (BUFFER)
R7002 1K
R7001 47K
C7008 56p
R7003 33K
R7006 10K
R7005 10K
R7007 100K
R7008 100K
C7010 0.033 (M)
C7011 0.033 (M)
C7012 0.033 (M)
C7020 1000p
C7009 47/35V
33.4
IC7001 UZT33MTA
R7004 2.4K
T-DAC
U
VH
VL
AFC
TU-AUDIO
TU-VIDEO
(CONTINUE MAIN 3/4)
1-G4 FE-H
2-G4 C-SYNC
3-G4 D-V SYNC
4-G4 AL+5V
5-G4 RF-SW
6-G4 D-PB+5V
7-G4 P-ON+10V
V-OUT
9-G4 V-ENV
10-G4 D-CONT
11-G4 D-FG
12-G4 V-REF
13-G4 D-PG
14-G4 AL+12V
15-G4 ROTA
V-IN
16-G4 D-REC+5V
17-G4 13.3Mz
21-G4 SP-SLP-PB-H
22-G4 LP/EP-H
23-G4 VPS-CHK
INSEL BLOCK
NO.#75**
INSEL
TU-AUDIO
AL+5V
TU-VIDEO
AL-30V
C7502 10/16V
R7502 100K
C7504 470P
R7509 22K
R7511 22K
R7508 820
R7510 820
R7512 1K
JK7501 SCART-JACK
WF1
IC7501 NJU4052BD (INPUT SELECT)
VDD INH VEE VSS
5.0 4.9 -6.1
R7501 22K
R7503 5.6K
R7504 68
D7503 UZ5.1BS
D7504 UZ5.1BS
C7505 150p
V-IN
V-OUT
CONV-V-OUT
R7506 120
R7505 68
R7507 150
J84 A-OUT
D7501 UZ5.1BS
D7502 UZ5.1BS
C7506 0.1
A-OUT
A-IN
D-PB+12V
D7505 1N4148M
C7503 3300p
K
L

[illegible] VR265

95/09/26

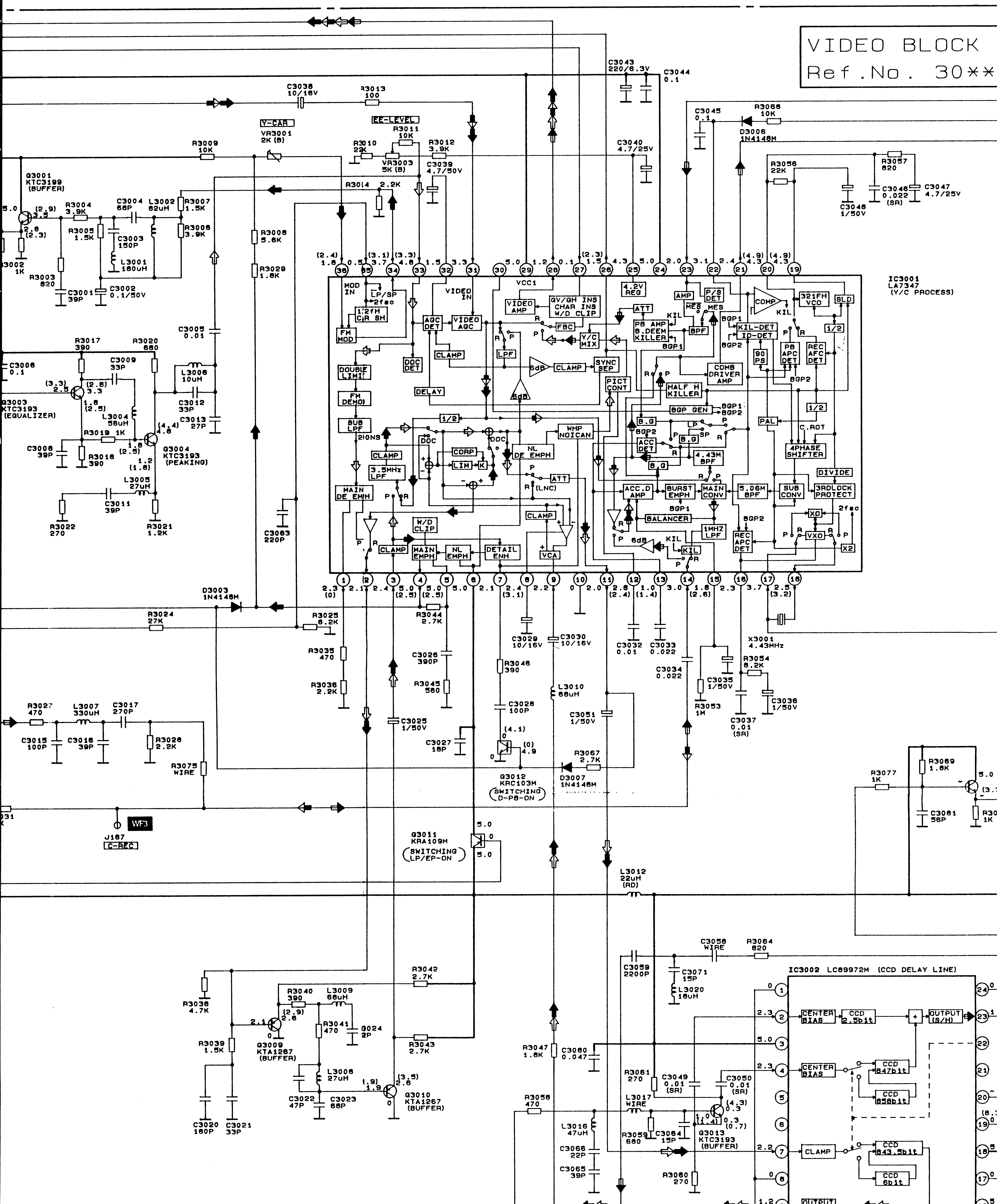
Main 3/4 Schematic Diagram

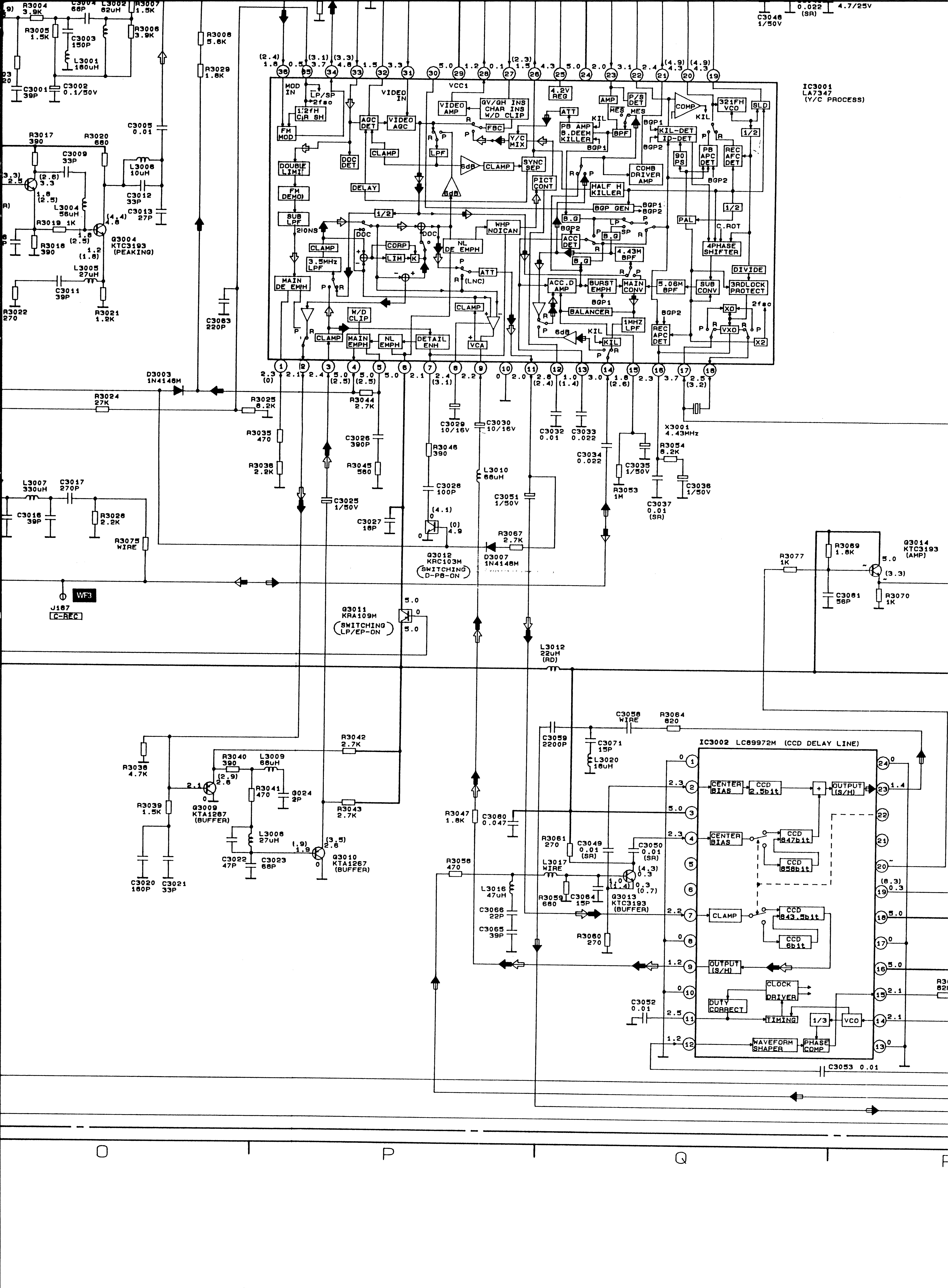

REC-Y
5
4
3
2
(TO HEAD AMP CBA CN3501)
CN3001
RF-SW 1
GND 2
Y/C-REC 3
Y-PB 4
C-PB 5
V-ENV 6
AL+5V 7
FE-H 8
FE-H GND 9
D-GND 10
D-CONT 11
AL+12V 12
D-FG 13
V-REF 14
D-PG 15
Q3091 KAC106M
(SWITCHING VPS-CHK-ON)
1.9
0
C3091 100/16V
R3090 680
C3090 470 /6.3V
R3091 680
R3092 220
1.9
1.2
Q3090 KTA1266 (BUFFER)
C3007 0.022
Q3001 KTC3199 (BUFFER)
J166 Y-REC
5.0
(2.9) 3.5
2.8 (2.3)
R3001 1.5K
R3002 1K
R3004 3.9K
R3005 1.5K
R3003 820
C3001 39P
C3004 68P
L3002 82uH
C3003 150P
L3001 180uH
C3002 0.1/50V
L3003 330uH
C3006 0.1
R3016 1K
Q3003 KTC3193 (EQUALIZER)
(3.3) 2.5
(2.8) 3.3
1.8 (2.5)
R3017 390
C3009 33P
R3020 680
L3004 56uH
R3019 1K
C3008 39P
R3018 390
1.8 (2.5)
(4.4) 4.8
1.2 (1.8)
Q3004 KTC3193 (PEAKIN
L3005 27uH
C3011 39P
R3022 270
R3021 1.2K
(CONTINUE MAIN 2/4)
VPS-CHK
FE-H
C-SYNC
D-V SYNC
AL+5V
RF-SW
D-PB+5V
P-ON+10V
V-OUT
V-ENV
D-CONT
D-FG
V-REF
D-PG
AL+12V
ROTA
V-IN
D-REC+5V
13.3MHz
SP-SLP-PB-H
LP/EP-H
L3014 4.7uH (RD)
C3062 0.1/50V
R1066 5.6K
R3024 27K
WF5
J164 C-PB
D3002 1N4148M
R3026 6.8K
R3027 470
C3015 100P
L3007 330uH
C3016 39P
C3017 270P
R3028 2.2K
R3075 WIRE
R3031 16K
WF3
J167 C-REC


AL+5V 7
FE-H 8
FE-H GND 9
D-GND 10
D-CONT 11
AL+12V 12
D-FG 13
V-REF 14
D-PG 15
(CONTINUE MAIN 2/4)
VPS-CHK
FE-H
C-SYNC
D-V SYNC
AL+5V
RF-SW
D-PB+5V
P-ON+10V
V-OUT
V-ENV
D-CONT
D-FG
V-REF
D-PG
AL+12V
ROTA
V-IN
D-REC+5V
13.3MHz
SP-SLP-PB-H
LP/EP-H
C3062 0.1/50V
R3066 5.6K
L3014 4.7uH (RD)
Q3001 KTC3199 (BUFFER)
5.0
(2.9) 3.5
2.8 (2.3)
J186 Y-REC
R3001 1.5K
R3002 1K
R3003 820
R3004 3.9K
R3005 1.5K
C3004 68P
L30 82u
C3003 150P
L3001 180uH
C3001 39P
C3002 0.1/50V
L3003 330uH
C3006 0.1
R3017 390
R3020 680
C3009 33P
(3.3) 2.5
(2.6) 3.3
1.8 (2.5)
R3016 1K
Q3003 KTC3193 (EQUALIZER)
L3004 56uH
R3019 1K
(4. 4.6
C3008 39P
R3018 390
1.8 (2.5)
1.2 (1.8)
L3005 27uH
C3011 39P
R3022 270
R3021 1.2K
R3024 27K
WF5
J184 C-PB
D3002 1N4148M
R3026 6.8K
R3027 470
L3007 330uH
C3017 270P
C3015 100P
C3016 39P
R3020 2.2K
R3031 16K
J187 C-REC
WF3
4
3
2
1
M
N
O

REC-Y SIGNAL　REC-C SIGNAL　PB-Y SIGNAL　PB-C SIGNAL

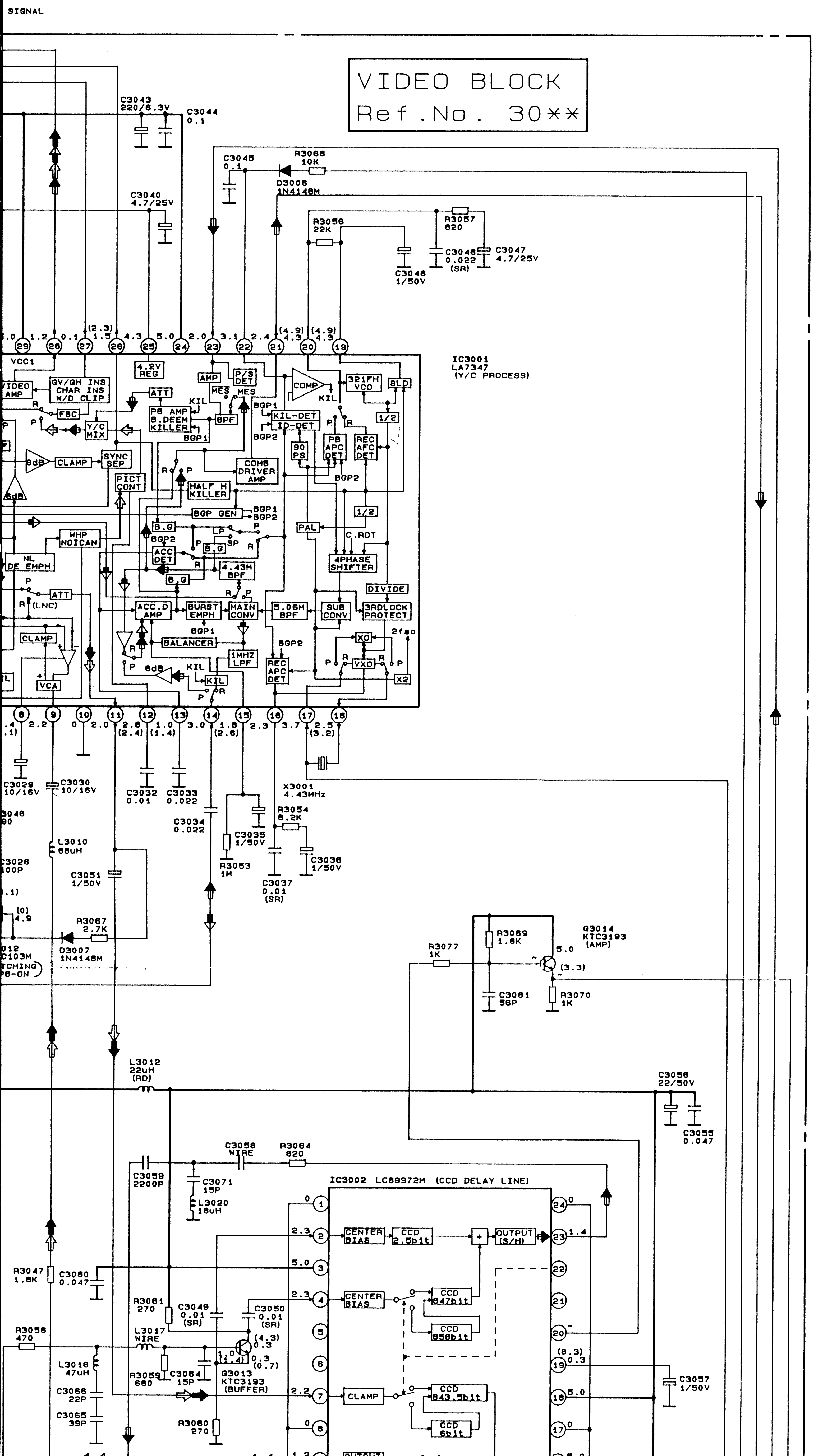
VIDEO BLOCK
Ref.No. 30**

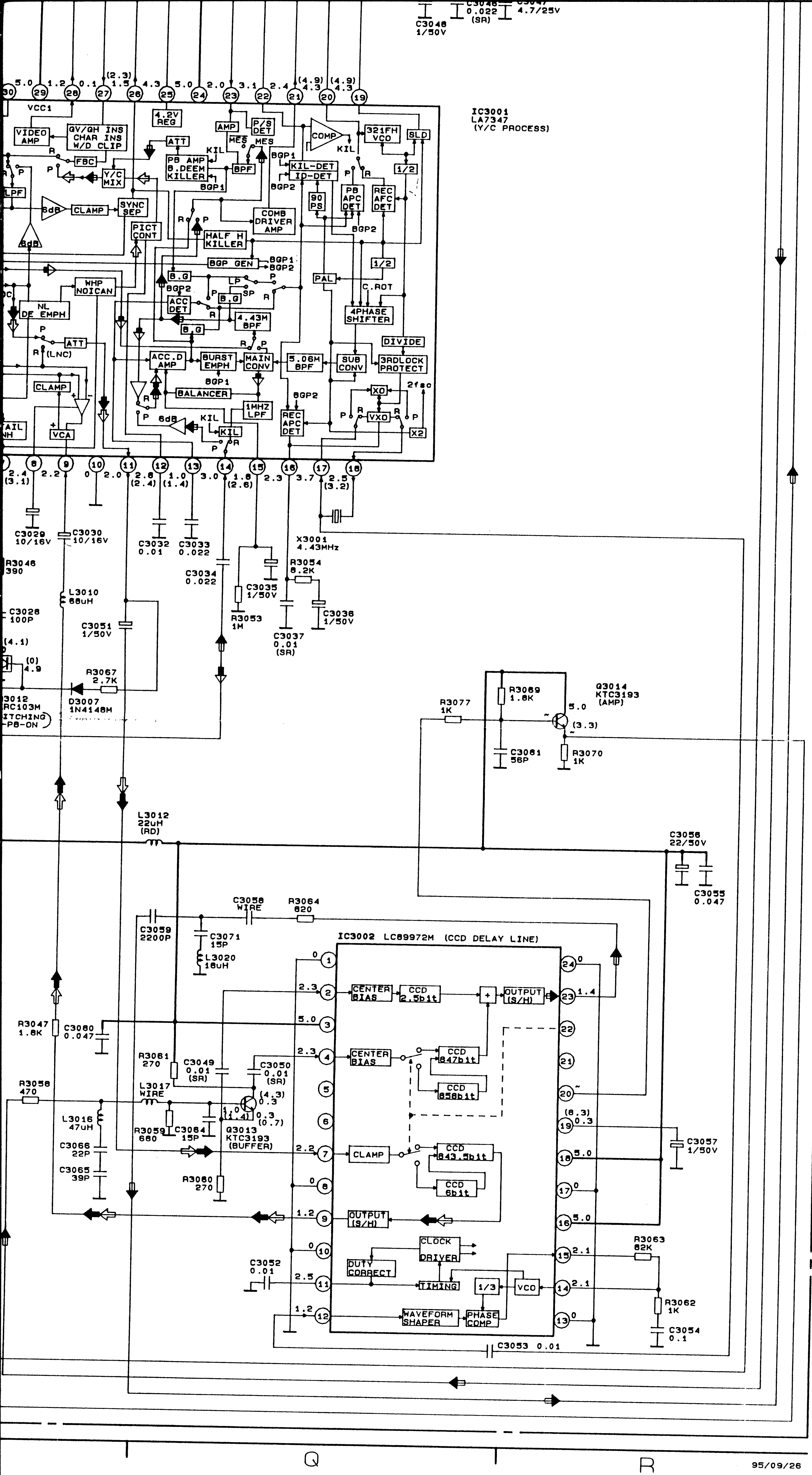

IC3001
LA7347
(Y/C PROCESS)
IC3002 LC89972M (CCD DELAY LINE)
Q3001
KTC3199
(BUFFER)
Q3003
KTC3193
(EQUALIZER)
Q3004
KTC3193
(PEAKING)
Q3009
KTA1267
(BUFFER)
Q3010
KTA1267
(BUFFER)
Q3011
KRA109M
(SWITCHING LP/EP-ON)
Q3012
KRC103M
(SWITCHING D-PB-ON)
Q3013
KTC3193
(BUFFER)
D3003
1N4148M
D3006
1N4148M
D3007
1N4148M
X3001
4.43MHz
J167
C-REC
WF3
Y-CAR
VR3001
2K (B)
EE-LEVEL
VR3003
5K (B)
C3038
10/16V
R3013
100
R3009
10K
R3010
22K
R3011
10K
R3012
3.9K
C3039
4.7/50V
R3014
2.2K
C3043
220/6.3V
C3044
0.1
C3040
4.7/25V
C3045
0.1
R3066
10K
R3056
22K
R3057
820
C3048
1/50V
C3046
0.022
(SR)
C3047
4.7/25V
R3004
3.9K
C3004
68P
L3002
82uH
R3007
1.5K
R3006
3.9K
R3005
1.5K
C3003
150P
L3001
180uH
R3002
1K
R3003
820
C3001
39P
C3002
0.1/50V
R3008
5.6K
R3029
1.8K
C3005
0.01
R3017
390
R3020
680
C3006
0.1
C3009
33P
L3006
10uH
C3012
33P
C3013
27P
L3004
56uH
R3019 1K
C3008
39P
R3018
390
L3005
27uH
C3011
39P
R3022
270
R3021
1.2K
C3063
220P
R3024
27K
R3025
8.2K
R3044
2.7K
R3035
470
R3036
2.2K
C3026
390P
R3045
560
C3025
1/50V
C3027
18P
C3029
10/16V
C3030
10/16V
R3046
390
C3028
100P
L3010
68uH
C3051
1/50V
R3067
2.7K
C3032
0.01
C3033
0.022
C3034
0.022
R3053
1M
C3035
1/50V
R3054
8.2K
C3036
1/50V
C3037
0.01
(SR)
R3027
470
L3007
330uH
C3017
270P
C3015
100P
C3016
39P
R3026
2.2K
R3075
WIRE
R3069
1.8K
R3077
1K
C3061
56P
L3012
22uH
(RD)
C3058
WIRE
R3064
820
C3059
2200P
C3071
15P
L3020
18uH
R3038
4.7K
R3039
1.5K
R3040
390
L3009
68uH
R3042
2.7K
R3041
470
C3024
2P
R3043
2.7K
L3008
27uH
C3022
47P
C3023
68P
C3020
180P
C3021
33P
R3047
1.8K
C3060
0.047
R3061
270
C3049
0.01
(SR)
C3050
0.01
(SR)
R3058
470
L3017
WIRE
L3016
47uH
R3059
680
C3064
15P
C3066
22P
C3065
39P
R3060
270
MOD IN
LP/SP
2fsc
1/2fH
C/R SH
FM MOD
AGC DET
VIDEO AGC
VIDEO IN
VCC1
VIDEO AMP
GV/QH INS
CHAR INS
W/D CLIP
FBC
Y/C MIX
LPF
CLAMP
6dB
SYNC SEP
DOC DET
DOUBLE LIMIT
FM DEMO
DELAY
SUB LPF
210NS
1/2
DOC
CLAMP
3.5MHz LPF
CORP
LIM
K
NL DE EMPH
WHP NOICAN
ATT
(LNC)
MAIN DE EMPH
W/D CLIP
CLAMP
MAIN EMPH
NL EMPH
DETAIL ENH
VCA
PICT CONT
4.2V REG
ATT
PB AMP
8.DEEM
KILLER
AMP
P/S DET
MES
BPF
KIL
COMP
321FH VCO
SLD
BGP1
KIL-DET
ID-DET
90 PS
PB APC DET
REC AFC DET
BGP2
COMB DRIVER AMP
HALF H KILLER
BGP GEN
B.G
ACC DET
4.43M BPF
PAL
C.ROT
4PHASE SHIFTER
DIVIDE
3RDLOCK PROTECT
ACC.D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
BALANCER
1MHZ LPF
REC APC DET
X0
VXO
X2
KIL
CENTER BIAS
CCD 2.5bit
OUTPUT (S/H)
CCD 847bit
CCD 858bit
CLAMP
CCD 843.5bit
CCD 6bit
OUTPUT


IC3001
LA7347
(Y/C PROCESS)
IC3002 LC89972M (CCD DELAY LINE)
MOD IN
LP/SP
2fsc
1/2fH C/R SH
FM MOD
DOUBLE LIMIT
FM DEMO
SUB LPF
MAIN DE EMPH
3.5MHz LPF
CLAMP
AGC DET
VIDEO AGC
VIDEO IN
DOC DET
DELAY
VIDEO AMP
VCC1
GV/GH INS CHAR INS W/D CLIP
FBC
Y/C MIX
LPF
6dB
SYNC SEP
PICT CONT
4.2V REG
ATT
PB AMP 8.DEEM KILLER
AMP
MES
P/S DET
BPF
COMP
KIL
321FH VCO
SLD
KIL-DET
ID-DET
BGP1
BGP2
90 PS
PB APC DET
REC AFC DET
1/2
COMB DRIVER AMP
HALF H KILLER
BGP GEN
B.G
LP
SP
ACC DET
4.43M BPF
PAL
C.ROT
4PHASE SHIFTER
DIVIDE
3RDLOCK PROTECT
ACC.D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
XO
VXO
X2
BALANCER
1MHZ LPF
REC APC DET
WHP NOICAN
NL DE EMPH
CORP
LIM
K
DOC
H/D CLIP
MAIN EMPH
NL EMPH
DETAIL ENH
VCA
LNC
2IONS
R3004 3.9K
C3004 68P
L3002 82uH
R3007 1.5K
R3005 1.5K
C3003 150P
L3001 180uH
R3006 3.9K
C3001 39P
C3002 0.1/50V
R3008 5.6K
R3029 1.8K
C3005 0.01
R3017 390
R3020 680
C3009 33P
L3006 10uH
C3012 33P
C3013 27P
L3004 56uH
R3019 1K
R3018 390
Q3004 KTC3193 (PEAKING)
L3005 27uH
C3011 39P
R3022 270
R3021 1.2K
C3063 220P
D3003 1N4148M
R3024 27K
R3025 8.2K
R3044 2.7K
R3035 470
R3036 2.2K
C3026 390P
R3045 560
C3029 10/16V
C3030 10/16V
R3046 390
C3028 100P
C3027 18P
Q3012 KRC103M
SWITCHING D-PB-ON
L3010 68uH
C3051 1/50V
R3067 2.7K
D3007 1N4148M
C3032 0.01
C3033 0.022
C3034 0.022
C3035 1/50V
R3053 1M
C3037 0.01 (SR)
X3001 4.43MHz
R3054 8.2K
C3036 1/50V
C3048 1/50V
0.022 (SR)
4.7/25V
L3007 330uH
C3017 270P
C3016 39P
R3028 2.2K
R3075 WIRE
C3025 1/50V
J187 C-REC
WF3
Q3011 KRA109M
SWITCHING LP/EP-ON
R3069 1.8K
Q3014 KTC3193 (AMP)
R3077 1K
C3061 56P
R3070 1K
L3012 22uH (RD)
C3058 WIRE
R3064 820
C3059 2200P
C3071 15P
L3020 18uH
R3038 4.7K
R3040 390
L3009 68uH
R3042 2.7K
R3041 470
C024 2P
Q3009 KTA1267 (BUFFER)
R3039 1.5K
L3008 27uH
R3043 2.7K
C3022 47P
C3023 68P
Q3010 KTA1267 (BUFFER)
C3020 180P
C3021 33P
R3047 1.8K
C3060 0.047
R3061 270
C3049 0.01 (SR)
C3050 0.01 (SR)
L3017 WIRE
R3058 470
L3016 47uH
C3066 22P
C3065 39P
R3059 680
C3064 15P
Q3013 KTC3193 (BUFFER)
R3060 270
C3052 0.01
C3053 0.01
CENTER BIAS
CCD 2.5bit
OUTPUT (S/H)
CCD 847bit
CCD 858bit
CCD 843.5bit
CCD 6bit
CLOCK DRIVER
DUTY CORRECT
TIMING
1/3
VCO
WAVEFORM SHAPER
PHASE COMP
O
P
Q

Comparison Chart of Models and Marks

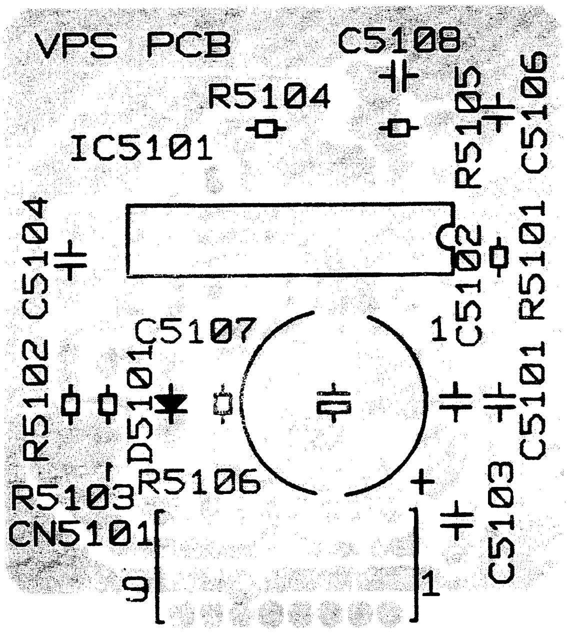
MODEL	MARK
9A-1011	A
9A-1211	B


SIGNAL
VIDEO BLOCK
Ref.No. 30**
IC3001
LA7347
(Y/C PROCESS)
IC3002 LC89972M (CCD DELAY LINE)
C3043 220/6.3V
C3044 0.1
C3040 4.7/25V
C3045 0.1
R3088 10K
D3006 1N4148M
R3056 22K
R3057 820
C3046 0.022 (SR)
C3047 4.7/25V
C3048 1/50V
VCC1
VIDEO AMP
QV/QH INS CHAR INS W/D CLIP
4.2V REG
ATT
AMP
P/S DET
MES
PB AMP B.DEEM KILLER
BPF
COMP
321FH VCO
SLD
KIL-DET
ID-DET
1/2
FBC
Y/C MIX
CLAMP
SYNC SEP
90 PS
PB APC DET
REC AFC DET
COMB DRIVER AMP
PICT CONT
HALF H KILLER
BGP GEN
BGP1
BGP2
B.G
WHP NOICAN
ACC DET
4.43M BPF
PAL
C.ROT
4PHASE SHIFTER
NL DE EMPH
DIVIDE
ACC.D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
3RDLOCK PROTECT
BALANCER
1MHZ LPF
XO
VXO
REC APC DET
X2
KIL
VCA
2fsc
C3029 10/16V
C3030 10/16V
C3032 0.01
C3033 0.022
C3034 0.022
C3035 1/50V
R3053 1M
X3001 4.43MHz
R3054 8.2K
C3036 1/50V
C3037 0.01 (SR)
L3010 68uH
C3028 100P
C3051 1/50V
R3067 2.7K
D3007 1N4148M
R3069 1.8K
Q3014 KTC3193 (AMP)
R3077 1K
C3061 56P
R3070 1K
L3012 22uH (RD)
C3056 22/50V
C3055 0.047
C3058 WIRE
R3064 820
C3059 2200P
C3071 15P
L3020 18uH
CENTER BIAS
CCD 2.5bit
OUTPUT (S/H)
CCD 847bit
CCD 858bit
CCD 843.5bit
CCD 6bit
R3047 1.8K
C3080 0.047
R3061 270
C3049 0.01 (SR)
C3050 0.01 (SR)
R3058 470
L3017 WIRE
L3016 47uH
R3059 680
C3064 15P
Q3013 KTC3193 (BUFFER)
C3066 22P
C3065 39P
R3060 270
C3057 1/50V

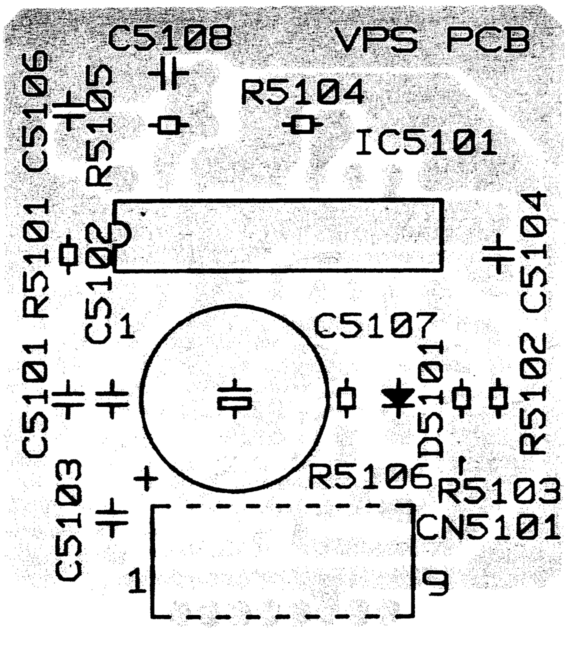

IC3001
LA7347
(Y/C PROCESS)
VCC1
VIDEO AMP
GV/GH INS CHAR INS W/D CLIP
4.2V REG
ATT
AMP
P/S DET
COMP
321FH VCO
SLD
FBC
Y/C MIX
PB AMP B.DEEM KILLER
BPF
KIL-DET
ID-DET
1/2
LPF
6dB
CLAMP
SYNC SEP
PICT CONT
COMB DRIVER AMP
90 PS
PB APC DET
REC AFC DET
HALF H KILLER
BGP GEN
BGP1
BGP2
WHP NOICAN
B.G
ACC DET
4.43M BPF
PAL
C.ROT
4PHASE SHIFTER
NL DE EMPH
ATT
(LNC)
DIVIDE
ACC.D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
3RDLOCK PROTECT
BALANCER
XO
2fsc
VXO
X2
REC APC DET
1MHZ LPF
KIL
VCA
MES
C3048 1/50V
C3046 0.022 (SR)
C3047 4.7/25V
C3029 10/16V
C3030 10/16V
C3032 0.01
C3033 0.022
C3034 0.022
C3035 1/50V
X3001 4.43MHz
R3054 8.2K
C3036 1/50V
R3053 1M
C3037 0.01 (SR)
R3046 390
L3010 68uH
C3028 100P
C3051 1/50V
R3067 2.7K
D3007 1N4148M
R3077 1K
R3069 1.8K
Q3014 KTC3193 (AMP)
C3061 56P
R3070 1K
L3012 22uH (RD)
C3056 22/50V
C3055 0.047
C3058 WIRE
R3064 820
C3059 2200P
C3071 15P
L3020 18uH
IC3002 LC89972M (CCD DELAY LINE)
CENTER BIAS
CCD 2.5bit
OUTPUT (S/H)
CCD 847bit
CCD 858bit
CLAMP
CCD 843.5bit
CCD 6bit
CLOCK DRIVER
DUTY CORRECT
TIMING
1/3
VCO
WAVEFORM SHAPER
PHASE COMP
R3047 1.8K
C3080 0.047
R3061 270
C3049 0.01 (SR)
C3050 0.01 (SR)
R3058 470
L3017 WIRE
L3016 47uH
R3059 680
C3064 15P
Q3013 KTC3193 (BUFFER)
C3066 22P
C3065 39P
R3060 270
C3057 1/50V
R3063 82K
R3062 1K
C3054 0.1
C3052 0.01
C3053 0.01
Q
R
95/09/26

H4105SCM3

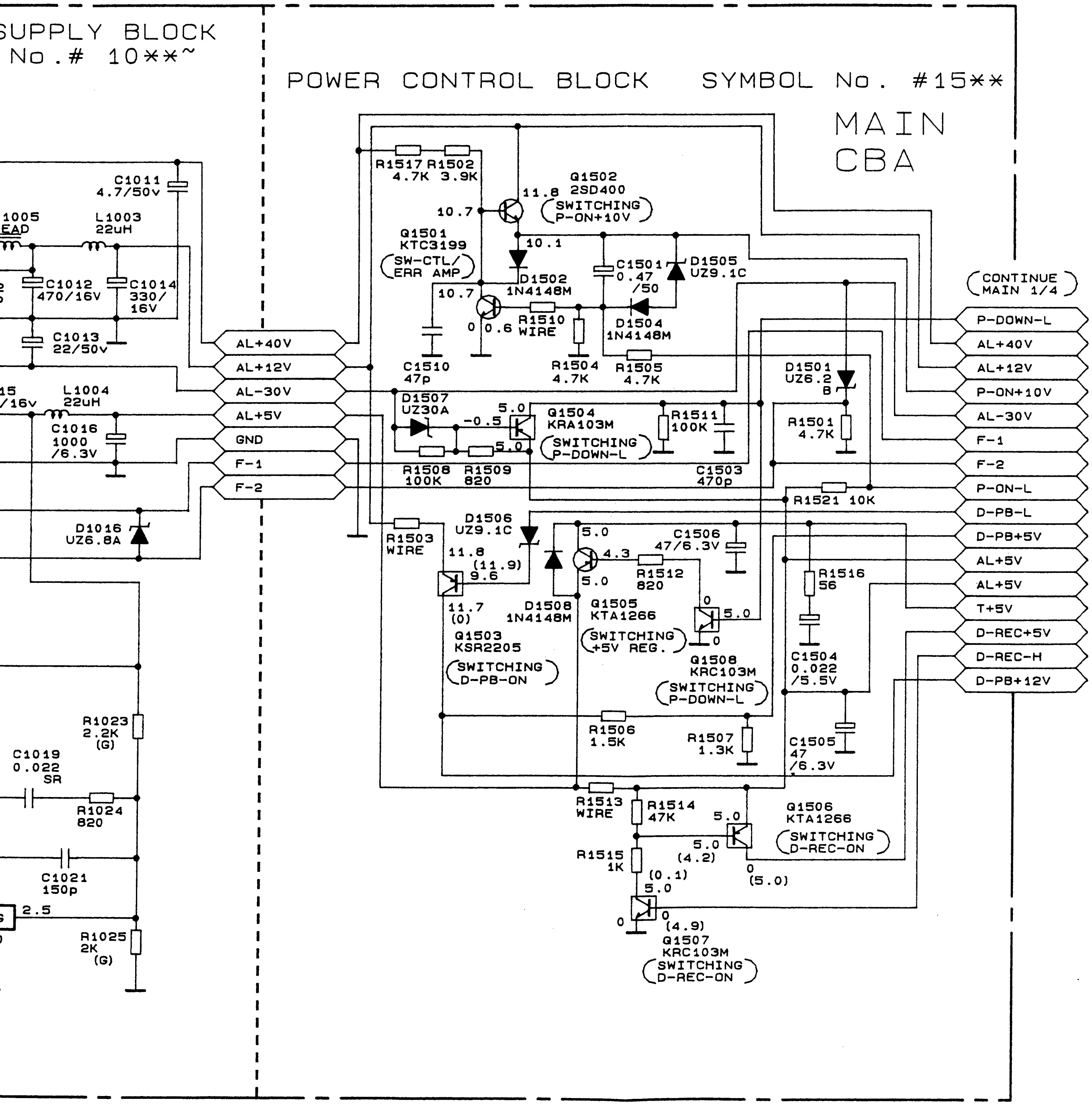
VPS CBA Top View


VPS PCB
C5108
R5104
R5105
C5106
IC5101
C5104
C5102
R5101
C5107
1
R5102
D5101
C5101
R5103
R5106
+
CN5101
C5103
9
1

VPS CBA Bottom View

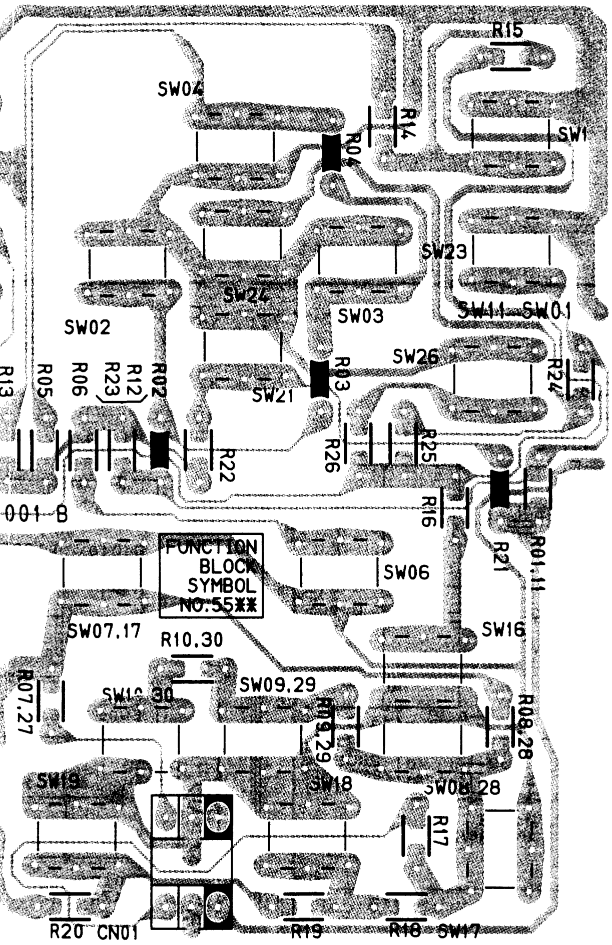

C5108
VPS PCB
C5106
R5105
R5104
IC5101
R5101
C5102
C5104
1
C5107
C5101
D5101
R5102
C5103
+
R5106
R5103
CN5101
1
9

CAUTION!
FIXED VOLTAGE POWER SUPPLY CIRCUIT IS USED IN THIS UNIT.
IF MAIN FUSE (F01) IS BLOWN, CHECK TO SEE THAT ALL COMPONENTS IN THE POWER SUPPLY CIRCUIT ARE NOT DEFECTIVE BEFORE YOU CONNECT THE AC PLUG TO THE AC POWER SUPPLY. OTHERWISE IT MAY CAUSE SOME COMPONENTS IN THE POWER SUPPLY CIRCUIT TO FAIL.


SUPPLY BLOCK
No.# 10**~
POWER CONTROL BLOCK SYMBOL No. #15**
MAIN CBA
C1011 4.7/50V
1005 EAD
L1003 22uH
C1012 470/16V
C1014 330/16V
C1013 22/50V
15 /16V
L1004 22uH
C1016 1000 /6.3V
D1016 UZ6.8A
R1023 2.2K (G)
C1019 0.022 SR
R1024 820
C1021 150p
2.5
R1025 2K (G)
AL+40V
AL+12V
AL-30V
AL+5V
GND
F-1
F-2
R1517 4.7K
R1502 3.9K
Q1502 2SD400
SWITCHING P-ON+10V
11.8
10.7
10.1
Q1501 KTC3199
SW-CTL/ ERR AMP
D1502 1N4148M
10.7
0
0.6
R1510 WIRE
C1501 0.47 /50
D1505 UZ9.1C
D1504 1N4148M
C1510 47p
R1504 4.7K
R1505 4.7K
D1507 UZ30A
5.0
-0.5
5.0
Q1504 KRA103M
SWITCHING P-DOWN-L
R1511 100K
C1503 470p
R1508 100K
R1509 820
D1501 UZ6.2 B
R1501 4.7K
R1521 10K
CONTINUE MAIN 1/4
P-DOWN-L
AL+40V
AL+12V
P-ON+10V
AL-30V
F-1
F-2
P-ON-L
D-PB-L
D-PB+5V
AL+5V
AL+5V
T+5V
D-REC+5V
D-REC-H
D-PB+12V
R1503 WIRE
D1506 UZ9.1C
11.8
(11.9)
9.6
11.7
(0)
D1508 1N4148M
Q1503 KSR2205
SWITCHING D-PB-ON
5.0
4.3
5.0
R1512 820
C1506 47/6.3V
Q1505 KTA1266
SWITCHING +5V REG.
0
5.0
0
Q1508 KRC103M
SWITCHING P-DOWN-L
R1516 56
C1504 0.022 /5.5V
C1505 47 /6.3V
R1506 1.5K
R1507 1.3K
R1513 WIRE
R1514 47K
5.0
5.0
(4.2)
Q1506 KTA1266
SWITCHING D-REC-ON
0
(5.0)
R1515 1K
(0.1)
5.0
0
0
(4.9)
Q1507 KRC103M
SWITCHING D-REC-ON

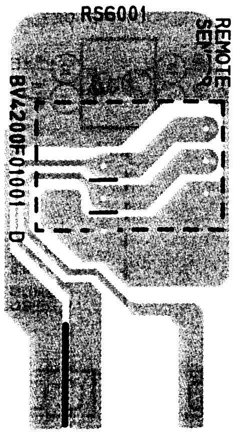
95/08/30

on CBA Bottom View


R15
SW04
R14
SW1
R04
SW23
SW24
SW03
SW11 SW01
SW02
R13
R05
R06
R23
R12
R02
R03
SW26
R24
SW21
R22
R26
R25
R16
001 B
FUNCTION BLOCK SYMBOL NO:55**
SW06
R21
R01,11
SW07,17
R10,30
SW16
R07,27
SW10,30
SW09,29
R09,29
R08,28
SW19
SW18
SW08,28
R17
R20
CN01
R19
R18
SW17

BV4200F01001B

mote Sensor CBA Bottom View


RS6001
REMOTE SENSOR
BV4200F01001 D

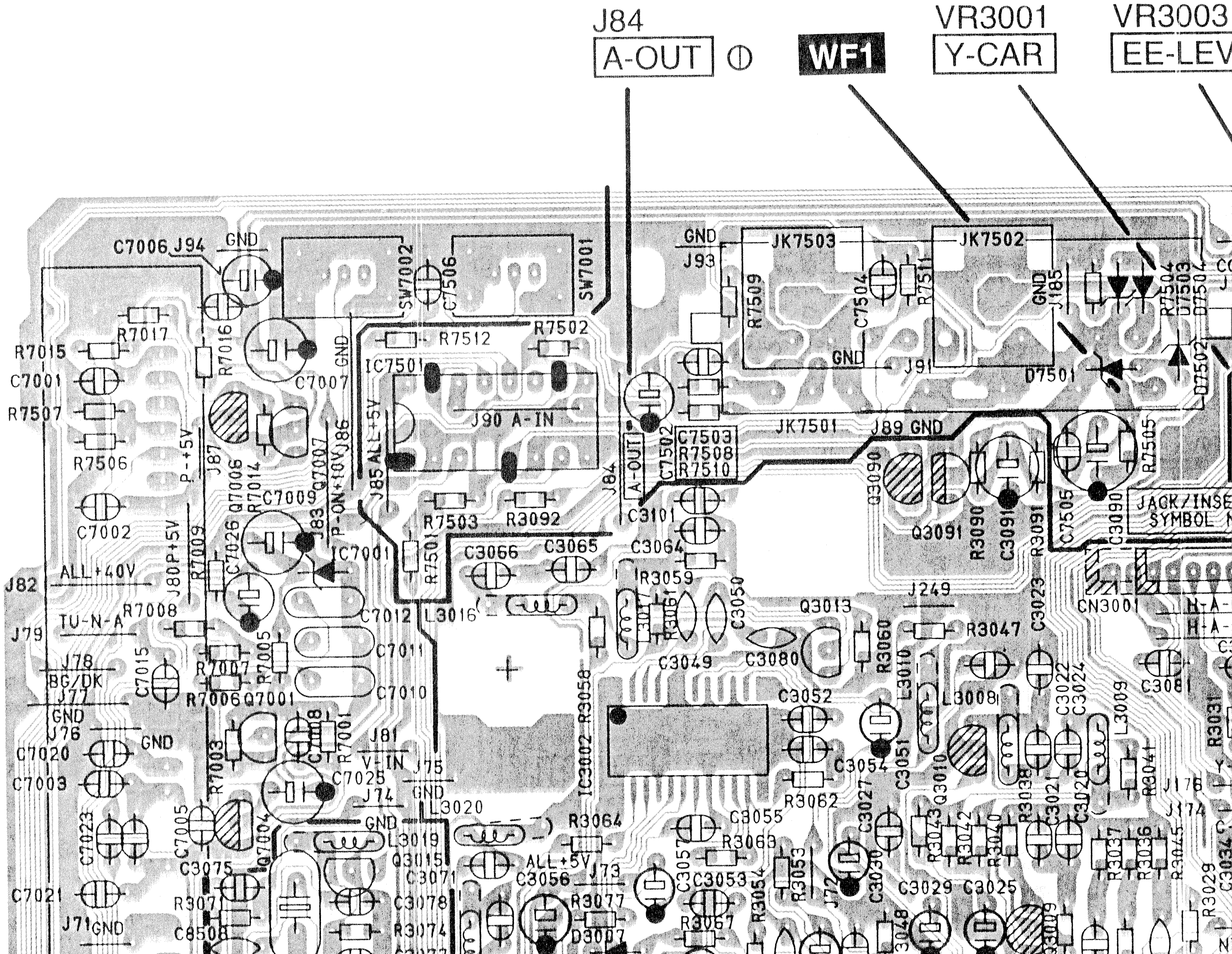
BV4200F01001D

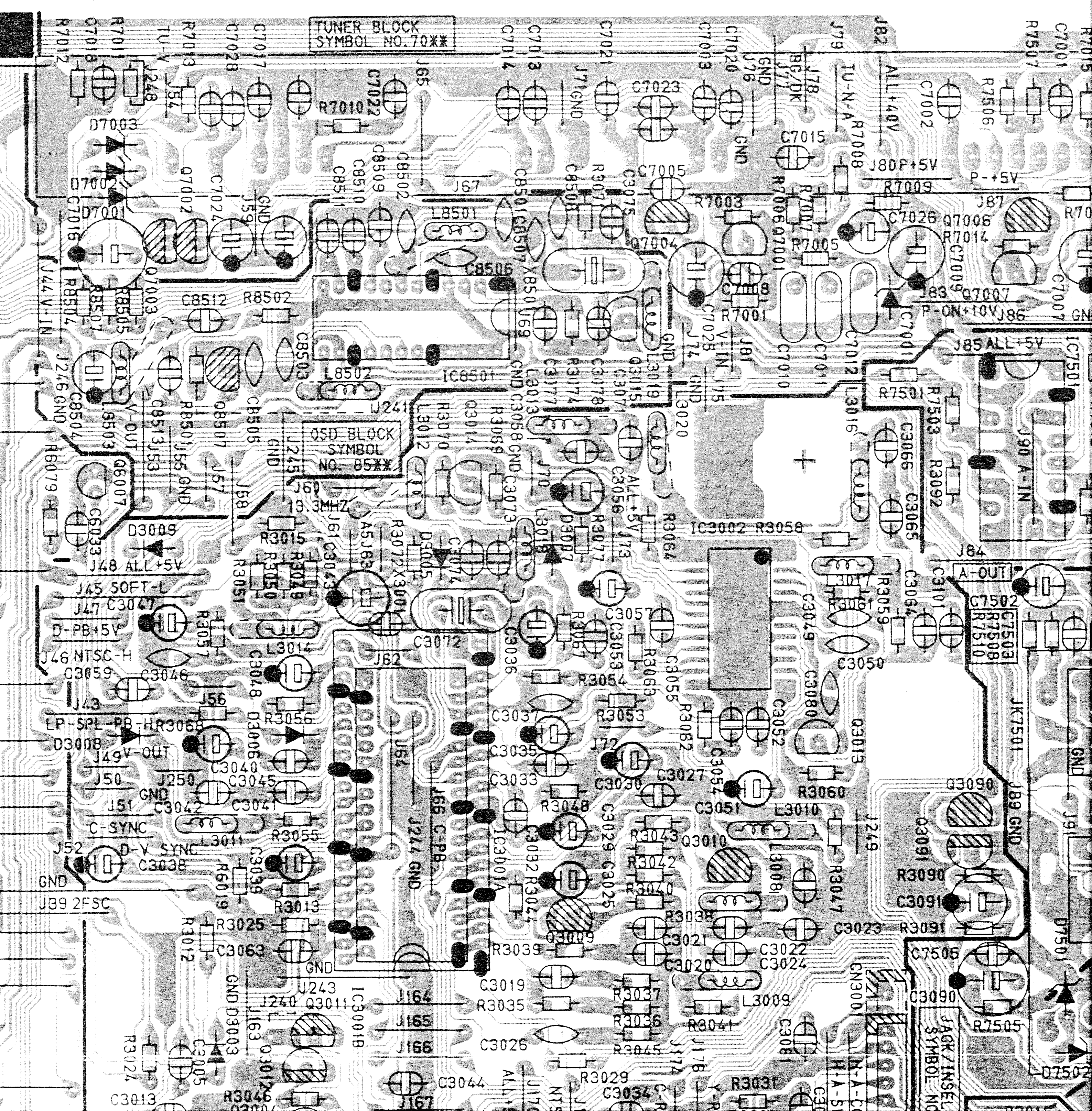
The following table shows the difference between Type A and B of Remote Control Unit.

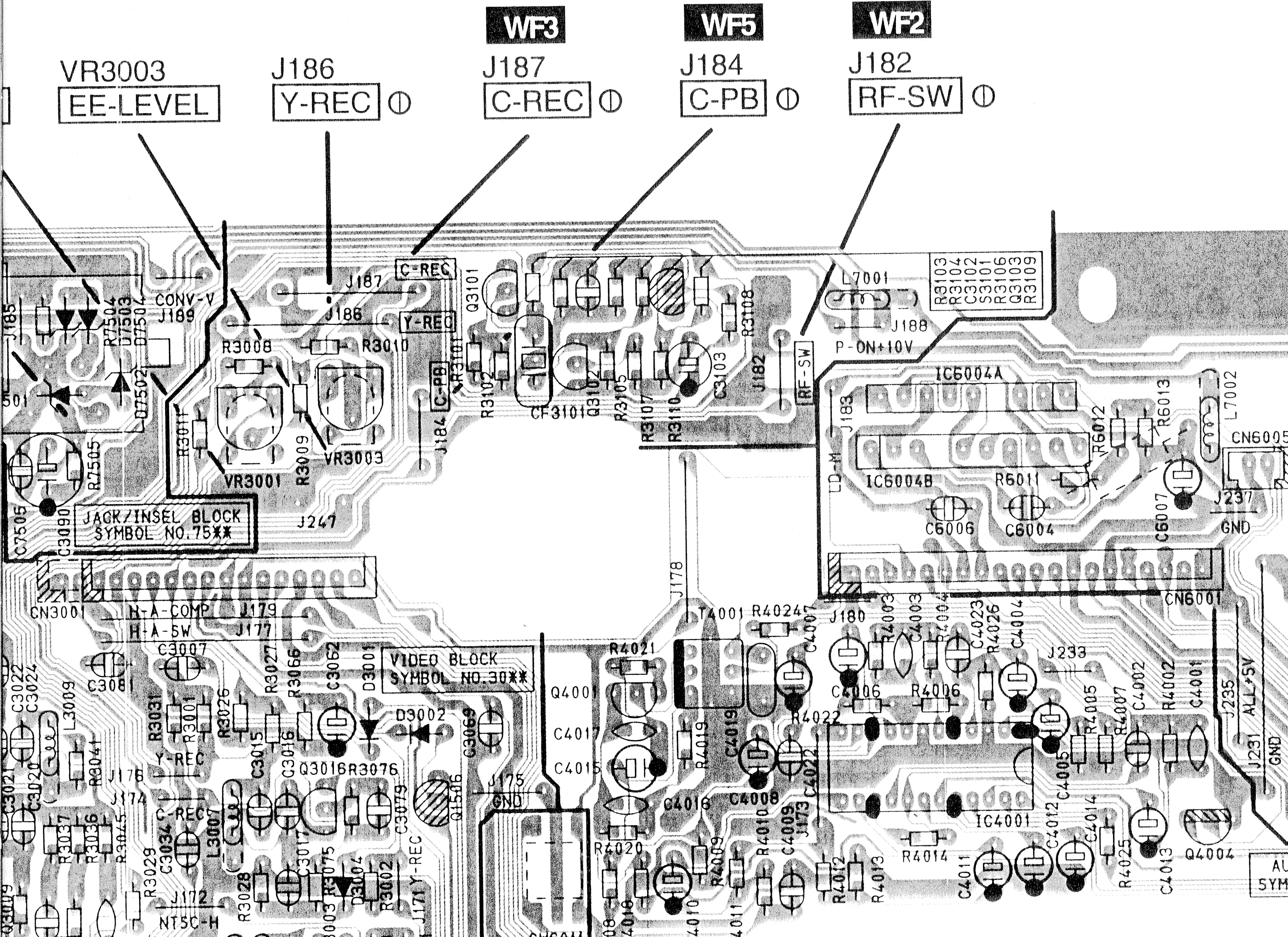
	Maker No.	Remote Sensor CBA (MCV-D)	Marking of 27N on the surface of the unit.
Type A	HC-278N	Used	Yes
Type B	PIC-12042LF	Not Used	No

Note: Remote Control Unit RS6001 has two types; Type A to be mounted on Remote Sensor CBA (MCV-D) and Type B to be directly mounted on Main CBA (MCV-A). (Type A is included in Remote Sensor CBA's table in the parts list.) Type B does not employ a remote sensor PCB. Type A and B are interchangeable for the same Main CBA (MCV-A).

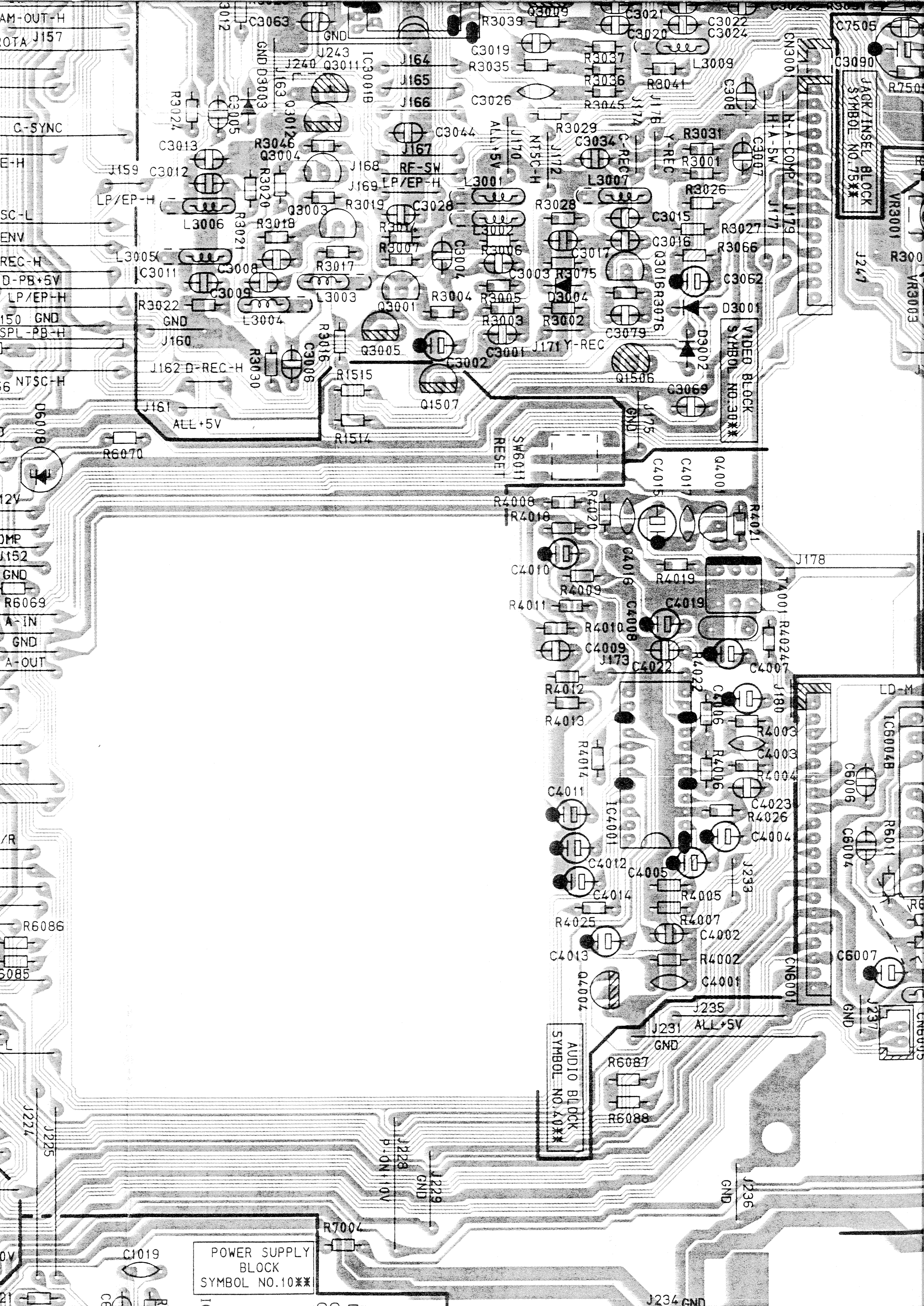
Main CBA Top View

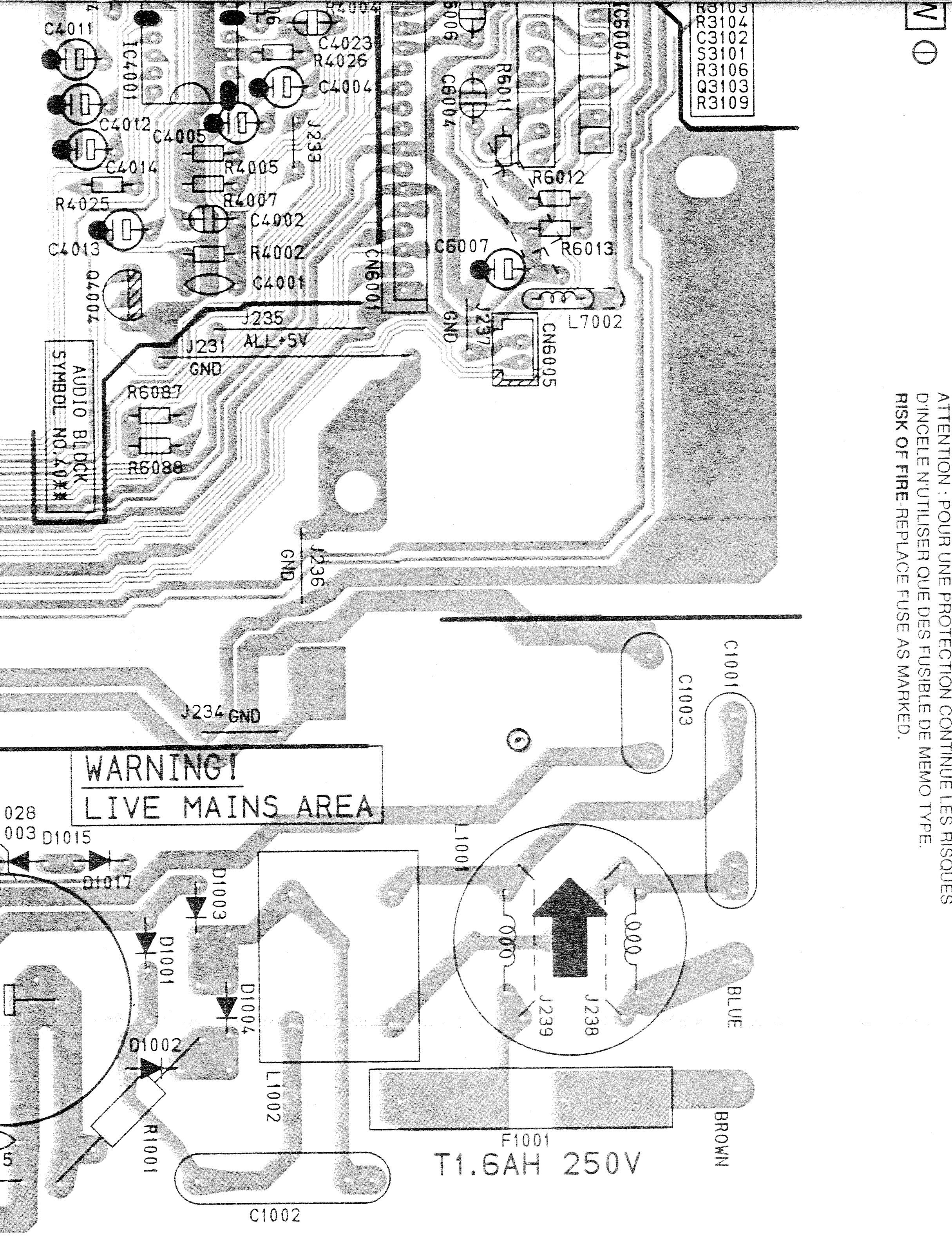

J84
A-OUT
WF1
VR3001
Y-CAR
VR3003
EE-LEV


TUNER BLOCK
SYMBOL NO.70**
OSD BLOCK
SYMBOL
NO. 85**
JACK/INSEL
SYMBOL NO
R7012
C7018
R7011
TU-V
R7013
C7028
C7017
C7014
C7013
C7021
C7003
C7020
J82
ALL+40V
J79
TU-N-A
J78
BG/DK
J77
J76
GND
R7507
C7001
R7015
C7002
R7506
J248
J54
J65
C7022
R7010
J71
GND
C7023
C7015
R7008
D7003
D7002
D7001
C7016
Q7002
C7024
J59
GND
C8509
C8502
C8510
C8511
J67
C8501
C8508
R3075
C3075
C7005
R7006
R7007
R7003
J80 P+5V
R7009
P-+5V
J87
L8501
C8507
C8506
X8501
Q7004
Q7001
R7005
C7026
Q7006
R7014
C7009
Q7003
R8504
R8507
R8505
C8512
R8502
U69
C7008
R7001
C7025
J83
P-ON+10V
Q7007
J86
J44 V-IN
C8503
L8502
IC8501
GND
J81
V-IN
J75
J74
L3019
C7010
C7011
C7012
L3016
C7007
J85 ALL+5V
IC7501
J246 GND
C8504
L8503
V-OUT
C8513
R8501
Q8507
C8505
J241
R3070
Q3014
R3069
C3058
GND
L3013
C3077
R3074
C3078
C3071
Q3015
L3020
R7501
R7503
C3066
R3092
J90 A-IN
R6079
Q6007
C6033
J53
J55 GND
J57
J58
J245
GND
L3012
J70
C3073
ALL+5V
C3056
R3064
IC3002
R3058
C3065
D3009
J48 ALL+5V
R3015
J60
13.3MHZ
J61
C3043
A5J63
R3072
X3001
D3005
C3074
L3018
D3007
R3077
J73
J84
A-OUT
J45 SOFT-L
R3051
R3050
R3049
J47
C3047
D-PB+5V
R3057
L3014
C3072
C3036
C3057
R3067
C3053
R3063
C3055
L3017
R3061
R3059
C3049
C3064
C3101
C7502
R7508
R7510
C7503
J46 NTSC-H
C3059
C3046
C3048
J62
R3054
R3053
C3050
C3080
J43
LP-SPL-PB-H
R3068
J56
R3056
D3006
C3037
C3035
R3062
C3052
Q3013
JK7501
GND
D3008
J49 V-OUT
C3040
J64
J72
C3054
J50
J250
C3045
GND
C3033
C3030
C3027
R3060
Q3090
J89 GND
J51
C3042
C3041
J66 C-PB
R3048
C3051
L3010
J249
C-SYNC
L3011
R3055
J244 GND
IC3001A
C3029
R3043
Q3010
Q3091
J52
D-V SYNC
C3038
C3039
C3032
R3044
C3025
R3042
L3008
R3047
R3090
GND
R6019
R3040
C3091
J39 2FSC
R3013
R3038
C3023
R3091
D7501
R3012
R3025
C3063
Q3009
R3039
C3021
C3022
C3024
C7505
GND
C3020
CN3001
C3090
J243
J240
Q3011
GND
D3003
IC3001B
J164
C3019
R3037
L3009
J165
R3035
R3036
R3041
R7505
R3024
C3005
J63
Q3012
J166
C3026
R3045
J174
J176
C3081
H-A-S
N-A-C
C3013
R3046
Q3004
C3044
J167
ALL
J170
NTS
R3029
C3034
C-R
Y-R
R3031
D7502

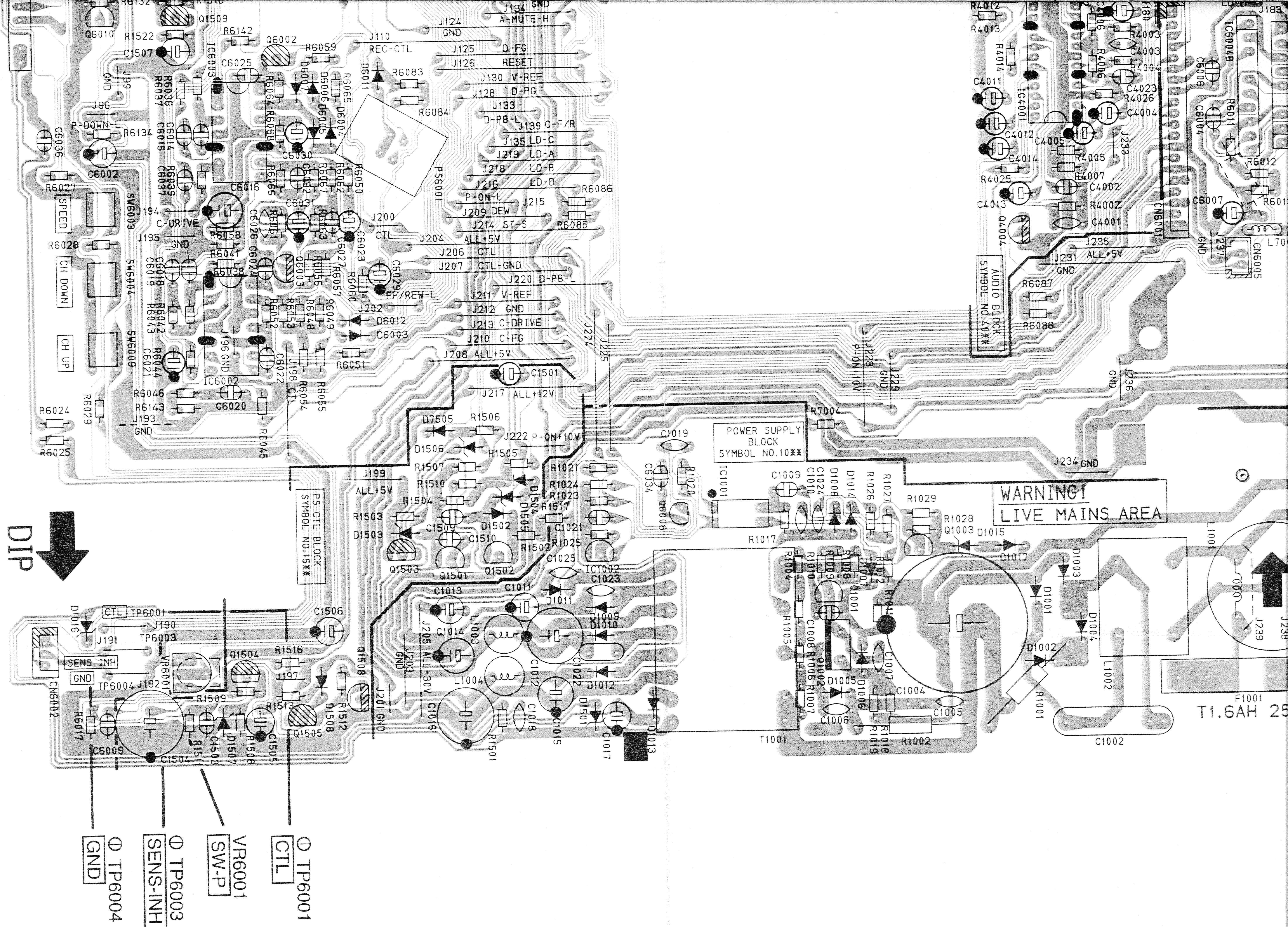

VR3003
EE-LEVEL
J186
Y-REC
WF3
J187
C-REC
WF5
J184
C-PB
WF2
J182
RF-SW
CONV-V
J189
JACK/INSEL BLOCK
SYMBOL NO.75**
VIDEO BLOCK
SYMBOL NO.30**
AUDIO BLOCK
SYMBOL NO.40**
CN3001
H-A-COMP
H-A-SW
J179
J177
J178
J247
VR3001
VR3003
R3008
R3009
R3010
R3011
Q3101
Q3102
CF3101
C3103
R3108
R3103
R3104
C3102
S3101
R3106
Q3103
R3109
L7001
J188
P-ON+10V
IC6004A
IC6004B
LD-M
J183
R6011
R6012
R6013
L7002
CN6005
C6006
C6004
C6007
J237
GND
CN6001
T4001
R4024
J180
IC4001
J233
J235
ALL+5V
J231
GND
R6087
R6088
J236
GND
J234 GND
C1001
C1003
Q4001
Q4004
NT5C-H
Y-REC
C-REC

CAUTION
FOR CONTINUED PROTECTION AGAINST F
REPLACE ONLY WITH THE SAME TYPE FU
ATTENTION : POUR UNE PROTECTION CO
D'INCELE N'UTILISER QUE DES FUSIBLE D
RISK OF FIRE-REPLACE FUSE AS MARKED


AM-OUT-H
ROTA J157
C-SYNC
J159
LP/EP-H
NTSC-H
ALL+5V
D-REC-H
GND
J160
J161
J162
SPL-PB-H
D-PB+5V
ENV
R6070
D6008
12V
J152
R6069
A-IN
A-OUT
R6086
R6085
J224
J225
J228
J229
P.ON 10V
R7004
C1019
POWER SUPPLY
BLOCK
SYMBOL NO.10**
J234 GND
J236
J235 ALL+5V
J231 GND
R6087
R6088
AUDIO BLOCK
SYMBOL NO.40**
VIDEO BLOCK
SYMBOL NO.30**
JACK/INSEL BLOCK
SYMBOL NO.75**
SW6011
RESET
J175
J178
J173
J180
J233
J237
IC4001
IC6004B
CN6001
CN3001
IC3001B
T4001
Q4001
Q4004
Q1506
Q1507
Q3001
Q3003
Q3004
Q3005
Q3009
Q3011
Q3012
Q3016
D3001
D3002
D3003
D3004
VR3001
VR3003
J163
J164
J165
J166
J167
J168
J169
J170
J171 Y-REC
J172
J174
J176
J177
J179
J240
J243
J247
RF-SW
NTSC-H
C-REC
Y-REC
N-A-COMP
H-A-SW
L3001
L3002
L3003
L3004
L3005
L3006
L3007
L3009
R1514
R1515
C7505
C3090
R7505
C6006
C6004
C6007
R6011
LD-M


C4011
IC4101
C4023
R4026
C4004
C4012
C4005
J233
R4005
C4014
R4025
R4007
C4002
C4013
R4002
C4001
Q4004
CN6001
J235
ALL+5V
J231
GND
AUDIO BLOCK
SYMBOL NO.40✱✱
R6087
R6088
C6004
R6011
IC6004A
R6012
C6007
R6013
L7002
J237
GND
CN6005
R3103
R3104
C3102
S3101
R3106
Q3103
R3109
J236
GND
J234 GND
WARNING!
LIVE MAINS AREA
028
003
D1015
D1017
D1003
D1001
D1004
D1002
R1001
L1002
C1002
L1001
J239
J238
C1003
C1001
BLUE
BROWN
F1001
T1.6AH 250V

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.

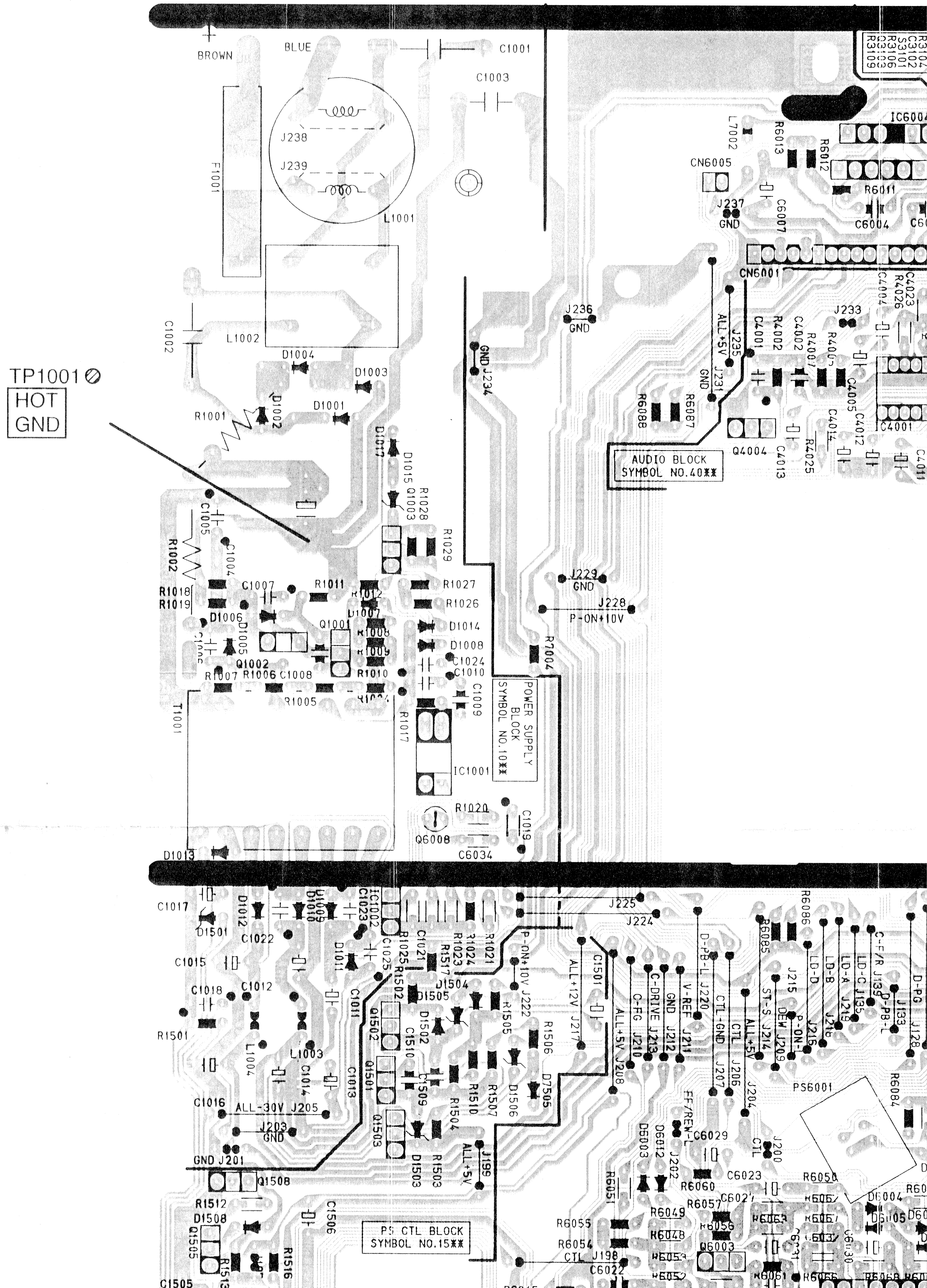


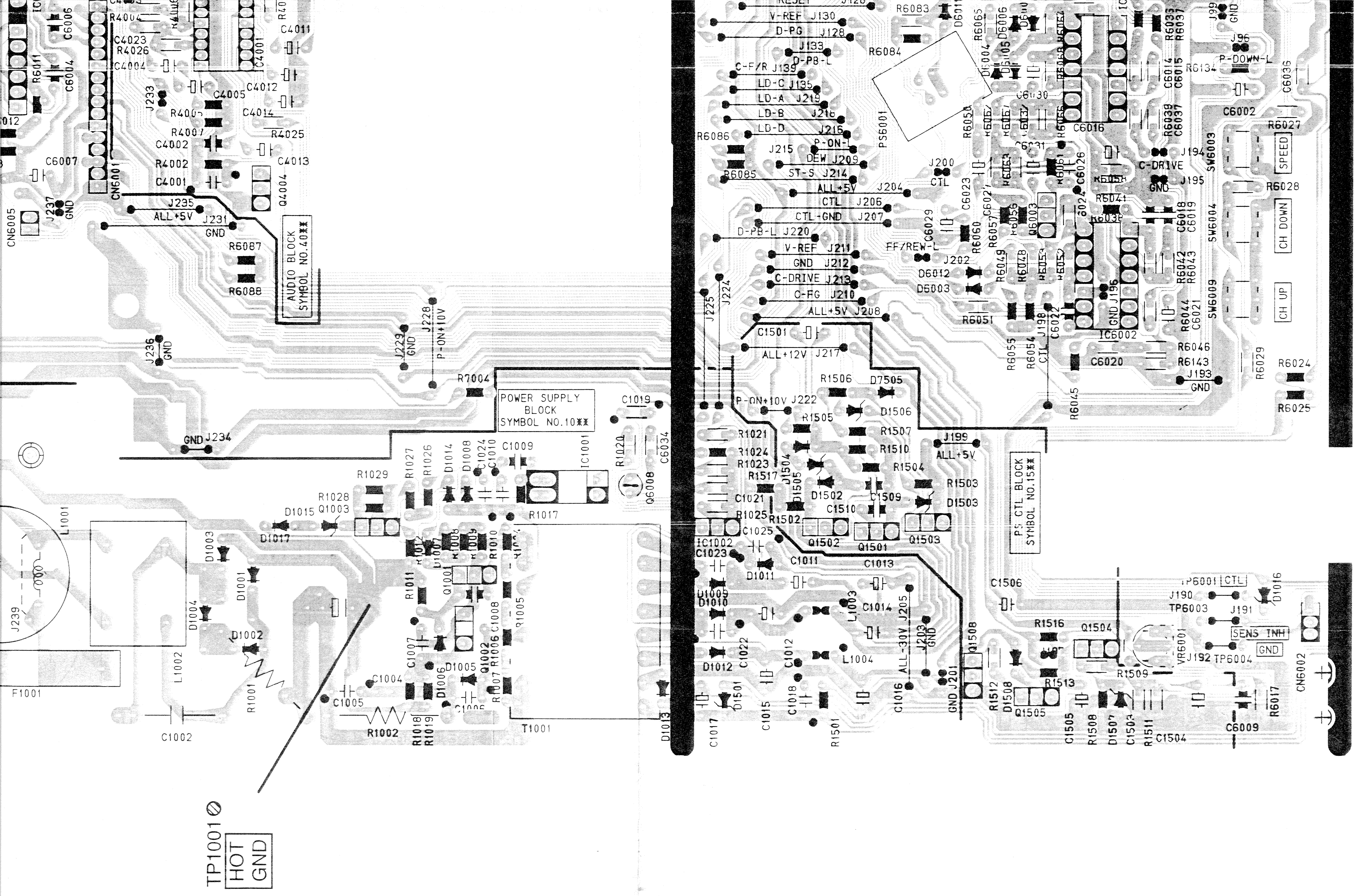
DIP
TP6001 CTL
VR6001 SW-P
TP6003 SENS-INH
TP6004 GND
CTL TP6001
J190
J191 TP6003
SENS INH
GND
TP6004 J192
CN6002
POWER SUPPLY BLOCK SYMBOL NO.10**
WARNING! LIVE MAINS AREA
PS CTL BLOCK SYMBOL NO.15**
AUDIO BLOCK SYMBOL NO.40**
T1.6AH 25
F1001
T1001
IC1001
IC1002
L1001
L1002
L1003
L1004
R1001
R1002
C1002
Q1003
J124 GND
J134 GND
J110 REC-CTL
J125 D-FG
J126 RESET
J130 V-REF
J128 D-PG
J133 D-PB-L
J139 C-F/R
J135 LD-C
J219 LD-A
J218 LD-B
J216 LD-D
P-ON-L
J215
J209 DEW
J214 ST-S
J200 CTL
J204 ALL+5V
J206 CTL
J207 CTL-GND
J220 D-PB-L
J211 V-REF
J212 GND
J213 C-DRIVE
J210 C-FG
J208 ALL+5V
J217 ALL+12V
J222 P-ON+10V
J199 ALL+5V
J228 P-ON-10V
J229 GND
J236 GND
J234 GND
J235 ALL+5V
J231 GND
J205 ALL-30V
J203 GND
J201 GND
J202 FF/REW-L
J198 CTL
J196 GND
J195 GND
J194 C-DRIVE
J193 GND
J96 P-DOWN-L
J99 GND
SPEED
CH DOWN
CH UP
SW6003
SW6004
SW6009
IC6002
IC6003
IC6004B
IC4001
PS6001
CN6001
CN6005
Q6002
Q6003
Q6010
Q1501
Q1502
Q1503
Q1504
Q1505
Q1508
Q1509
Q4004
L7001

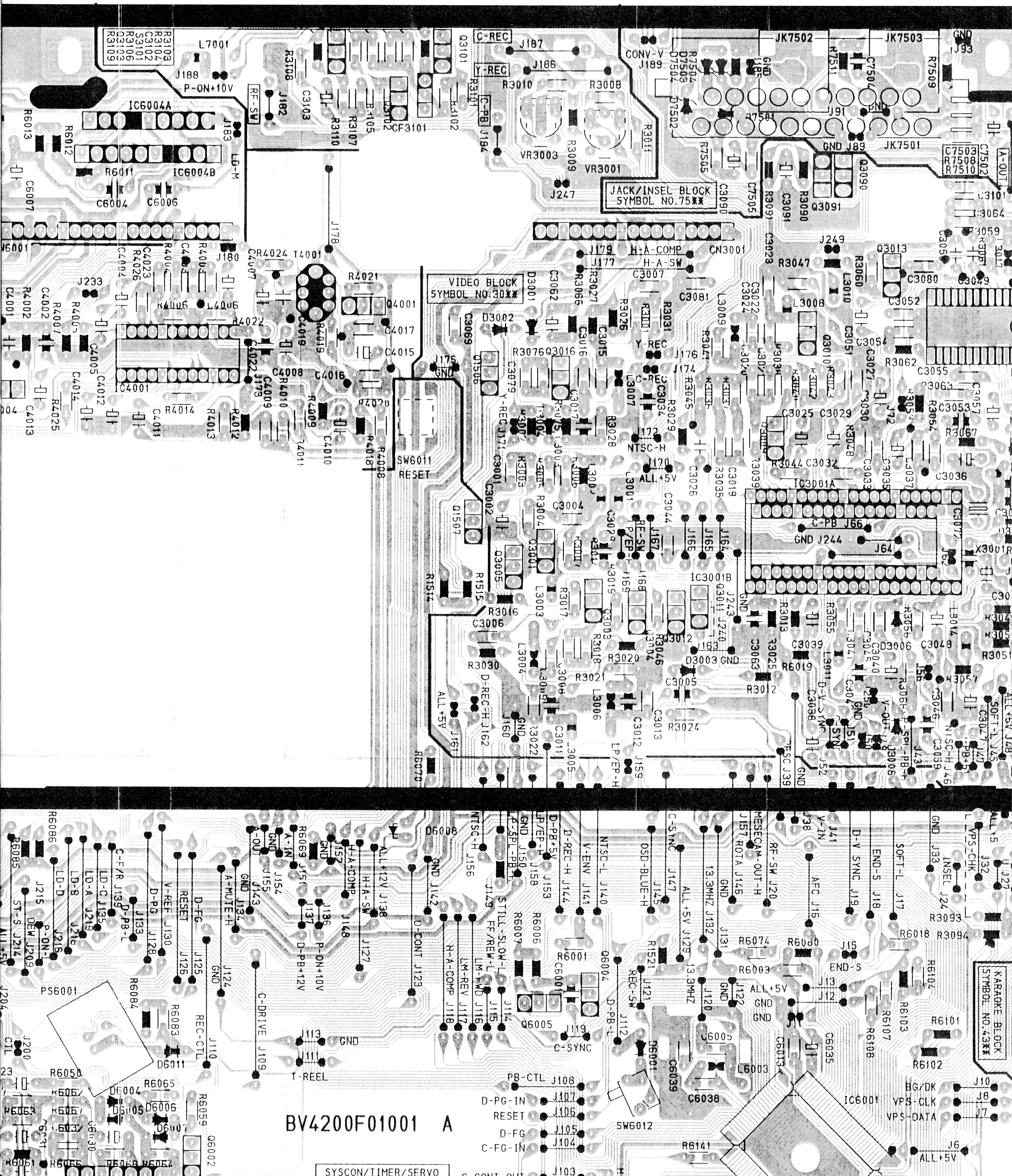
BV4200F01001A

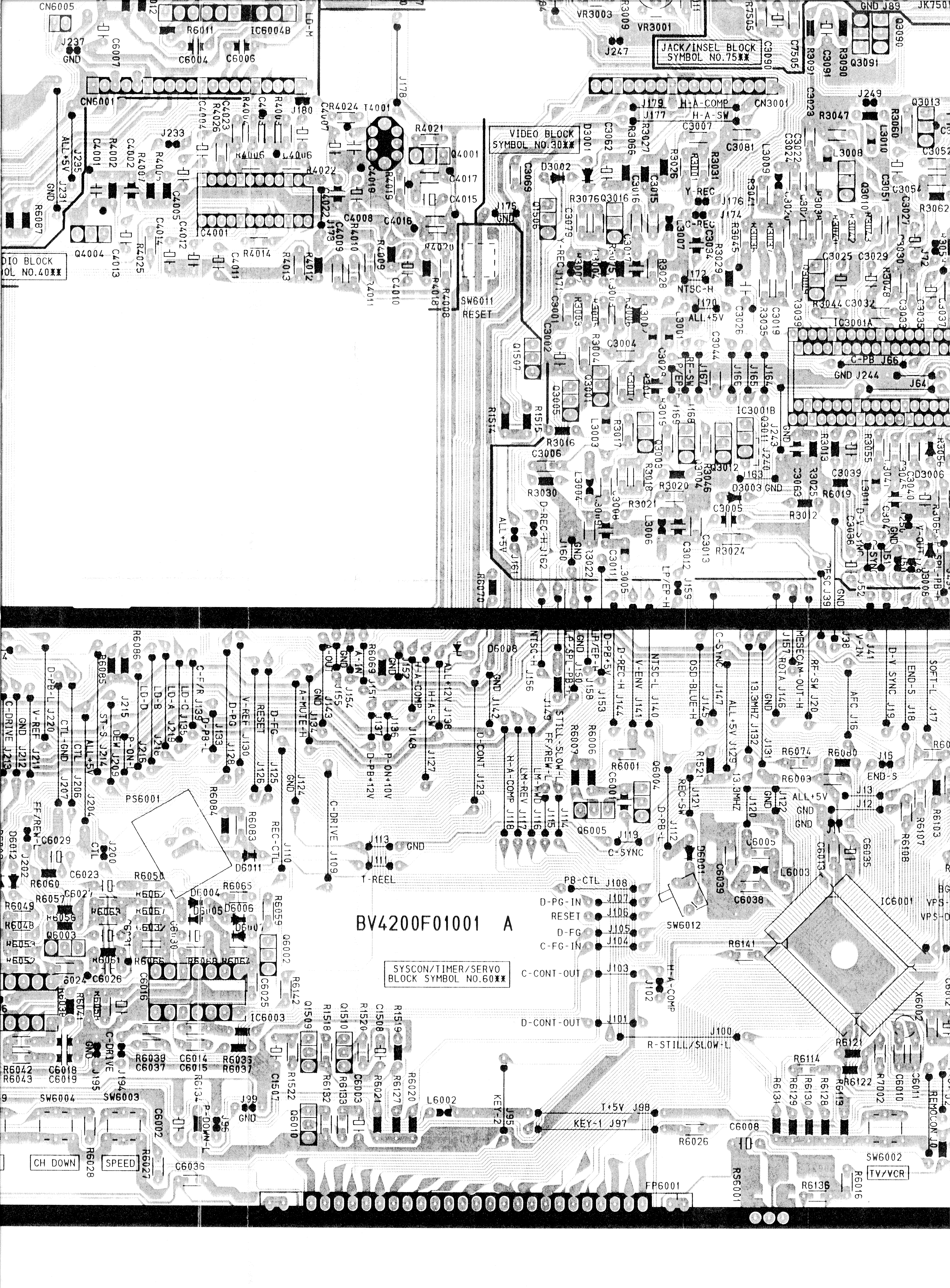
Main CBA Bottom View

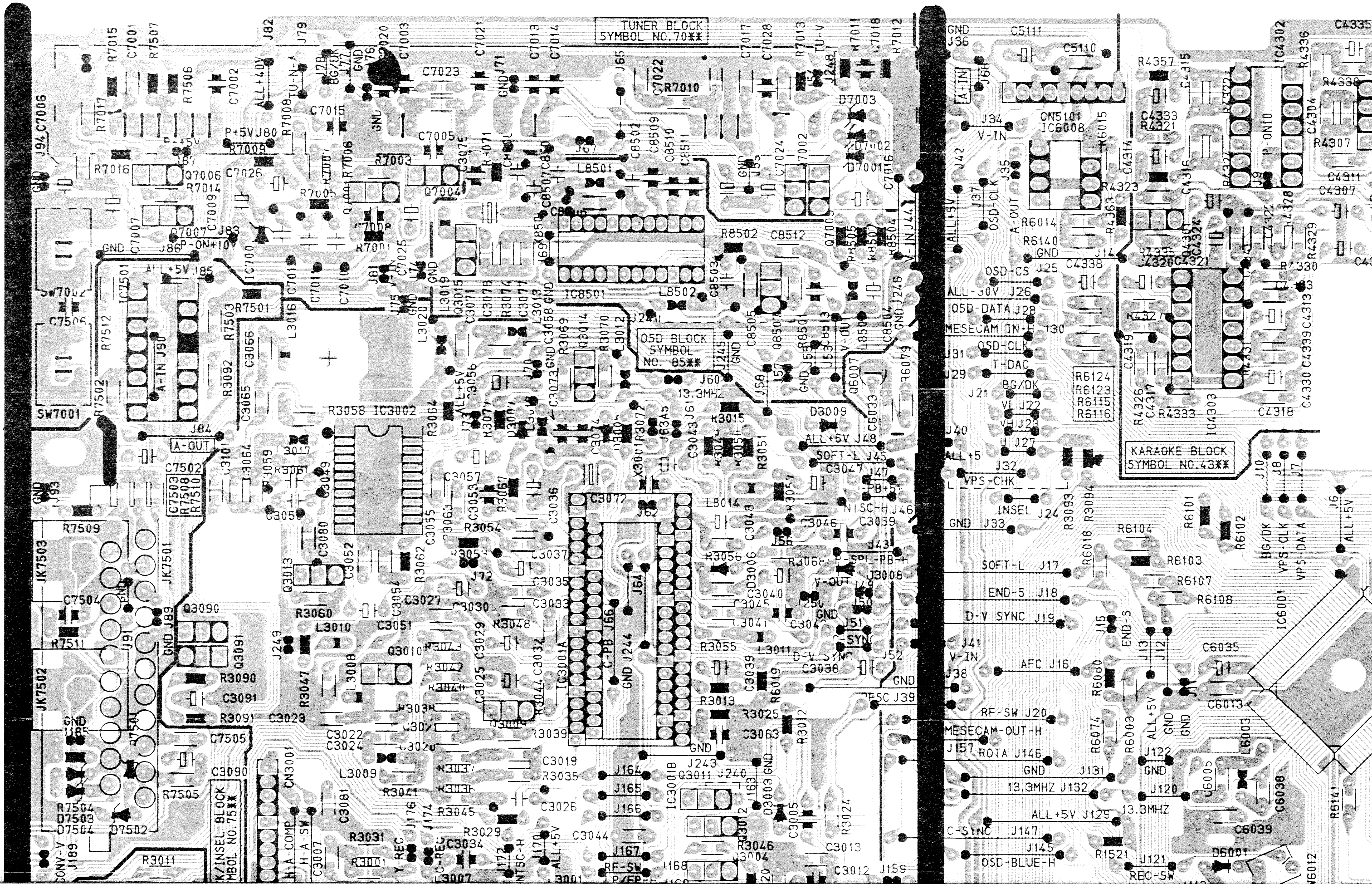
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.

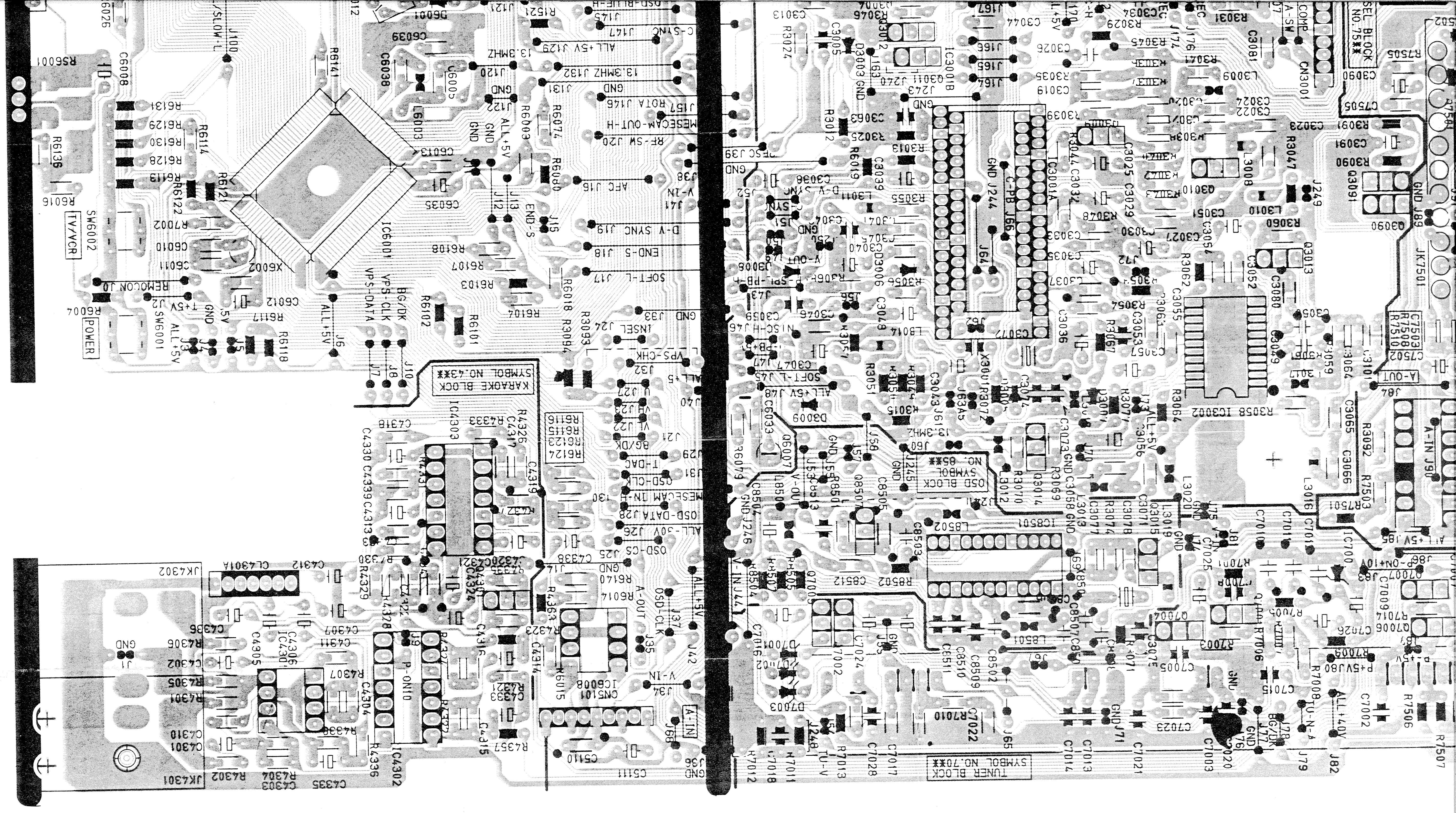

TP1001
HOT
GND
BROWN
BLUE
F1001
J238
J239
L1001
C1001
C1003
C1002
L1002
D1004
D1003
D1001
D1002
R1001
D1017
D1015
Q1003
R1028
R1029
C1005
C1004
R1002
R1018
R1019
C1007
R1011
R1012
D1007
D1006
D1005
Q1001
Q1002
R1008
R1009
R1010
R1007
R1006
C1008
R1005
R1027
R1026
D1014
D1008
C1024
C1010
C1009
R1017
T1001
IC1001
POWER SUPPLY BLOCK SYMBOL NO.10✱✱
R1020
C1019
Q6008
C6034
D1013
GND J234
J236 GND
J229 GND
J228 P-ON+10V
R7004
L7002
R6013
R6012
CN6005
R6011
C6007
J237 GND
C6004
IC6004
CN6001
C4023
R4026
J233
ALL+5V J235
GND J231
C4001
R4002
C4002
R4007
C4005
C4014
C4012
C4001
R6088
R6087
Q4004
C4013
R4025
AUDIO BLOCK SYMBOL NO.40✱✱
R3104
C3102
S3101
R3106
R3109
C1017
D1012
D1501
C1022
D1010
D1009
IC1002
C1023
C1025
D1011
C1015
C1018
C1012
R1501
L1004
L1003
C1014
C1011
C1013
C1016
ALL-30V J205
J203 GND
GND J201
Q1508
R1512
D1508
Q1505
R1513
R1516
C1506
C1505
R1025
R1502
Q1502
Q1501
Q1503
C1021
R1517
R1023
R1024
R1021
D1505
D1504
D1502
C1510
C1509
R1504
R1510
R1507
R1505
D1506
R1506
D7505
D1503
R1503
ALL+5V J199
P-ON+10V J222
PS CTL BLOCK SYMBOL NO.15✱✱
J225
J224
ALL+12V J217
C1501
ALL+5V J208
C-FG J210
C-DRIVE J213
GND J212
V-REF J211
D-PB-L J220
CTL-GND J207
CTL J206
ALL+5V J204
ST-S J214
DEW J209
P-ON-L
J215
J216
LD-D
LD-B
LD-A J219
LD-C J135
C-F/R J139
D-PB-L
J133
D-PG J128
R6086
R6085
R6084
PS6001
FF/REW-L
C6029
D6003
D6012
J202
R6051
R6060
C6023
CTL J200
R6050
R6049
R6057
C6027
R6055
R6048
R6056
R6063
R6054
CTL J198
C6022
R6053
Q6003
D6004
D6005


AUDIO BLOCK SYMBOL NO.40✱✱
POWER SUPPLY BLOCK SYMBOL NO.10✱✱
P: CTL BLOCK SYMBOL NO.15✱✱
TP1001 HOT GND
CN6001
CN6002
CN6005
IC1001
IC1002
IC6002
T1001
F1001
L1001
L1002
L1003
L1004
PS6001
VR6001
SW6003
SW6004
SW6009
SPEED
CH DOWN
CH UP
SENS INH
GND
CTL
TP6001
TP6003
TP6004
C-DRIVE
P-DOWN-L
FF/REW-L
J235 ALL+5V
J231 GND
J237 GND
J236 GND
J234 GND
J229 GND
J228 P-ON+10V
J239
J233
R7004
J130 V-REF
J128 D-PG
J133
D-PB-L J139
C-F/R
LD-C J135
LD-A J219
LD-B J218
LD-D J216
P-ON-L
J215
DEW J209
ST-S J214
ALL+5V J204
CTL J206
CTL-GND J207
D-PB-L J220
V-REF J211
GND J212
C-DRIVE J213
C-FG J210
ALL+5V J208
J225
J224
J200 CTL
J202
C1501
ALL+12V J217
P-ON+10V J222
J199 ALL+5V
J193 GND
J194
J195
J196 GND
J198 CTL
J190
J191
J192
J96
J99 GND
ALL-30V J205
J203 GND
GND J201
Q1001
Q1002
Q1003
Q1501
Q1502
Q1503
Q1504
Q1505
Q1508
Q4004
Q6003
Q6008
D1001
D1002
D1003
D1004
D1005
D1006
D1007
D1008
D1009
D1010
D1011
D1012
D1013
D1014
D1015
D1017
D1501
D1502
D1503
D1504
D1505
D1506
D1507
D1508
D1016
D7505
D6003
D6012
D6004
D6005
D6006
R1001
R1002
R1005
R1006
R1007
R1008
R1009
R1010
R1011
R1012
R1017
R1018
R1019
R1020
R1021
R1023
R1024
R1025
R1026
R1027
R1028
R1029
R1501
R1502
R1503
R1504
R1505
R1506
R1507
R1508
R1509
R1510
R1511
R1512
R1513
R1516
R1517
R4002
R4007
R4025
R4026
R6011
R6017
R6024
R6025
R6027
R6028
R6029
R6039
R6041
R6042
R6043
R6044
R6045
R6046
R6049
R6050
R6051
R6054
R6055
R6057
R6060
R6065
R6083
R6084
R6085
R6086
R6087
R6088
R6134
R6143
C1002
C1004
C1005
C1007
C1008
C1009
C1010
C1011
C1012
C1013
C1014
C1015
C1016
C1017
C1018
C1019
C1021
C1022
C1023
C1024
C1025
C1503
C1504
C1505
C1506
C1509
C1510
C4001
C4002
C4004
C4005
C4011
C4012
C4013
C4014
C4023
C6002
C6004
C6006
C6007
C6009
C6014
C6015
C6016
C6018
C6019
C6020
C6021
C6022
C6023
C6024
C6026
C6029
C6030
C6034
C6035
C6037


BV4200F01001 A
SYSCON/TIMER/SERVO
VIDEO BLOCK
SYMBOL NO.30**
JACK/INSEL BLOCK
SYMBOL NO.75**
KARAOKE BLOCK
SYMBOL NO.43**
SW6011
RESET
SW6012
IC6001
IC6004A
IC6004B
IC3001A
IC3001B
CN3001
JK7501
JK7502
JK7503
VR3001
VR3003
C-REC
Y-REC
C-PB
RF-SW
A-OUT
P-ON+10V
LD-M
H-A-COMP
H-A-SW
NTSC-H
ALL+5V
GND
PB-CTL J108
D-PG-IN J107
RESET J106
D-FG J105
C-FG-IN J104
BG/DK J10
VPS-CLK J8
VPS-DATA J7
ALL+5V J6
T-REEL
C-DRIVE J109
REC-CTL J110
D-CONT J123
C-SYNC J119
13.3MHZ
PS6001


BV4200F01001 A
SYSCON/TIMER/SERVO BLOCK SYMBOL NO.60**
VIDEO BLOCK SYMBOL NO.30**
JACK/INSEL BLOCK SYMBOL NO.75**
DIO BLOCK
OL NO.40**
CH DOWN
SPEED
TV/VCR
SW6002
SW6003
SW6004
SW6011
RESET
SW6012
IC6001
IC6003
IC6004B
IC4001
IC3001A
IC3001B
CN6001
CN6005
CN3001
FP6001
T4001
PS6001
X6002
VR3001
VR3003
KEY-1 J97
T+5V J98
KEY-2
R-STILL/SLOW-L
D-CONT-OUT
C-CONT-OUT
C-FG-IN
D-FG
RESET
D-PG-IN
PB-CTL
C-DRIVE J109
T-REEL
REMOCON J0

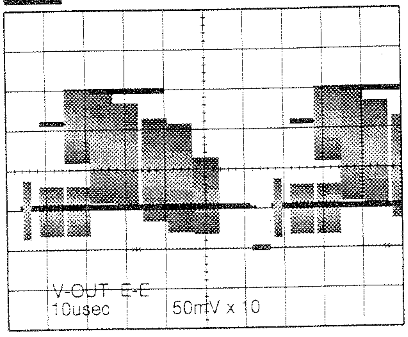

TUNER BLOCK SYMBOL NO.70**
OSD BLOCK SYMBOL NO. 85**
KARAOKE BLOCK SYMBOL NO.43**
K/INSEL BLOCK SYMBOL NO.75**
IC3002
IC8501
IC3001A
IC3001B
IC4302
IC4303
IC6001
IC6008
IC7501
JK7501
JK7502
JK7503
SW7001
SW7002
CN3001
CN5101


KARAOKE BLOCK SYMBOL NO.43**
OSD BLOCK SYMBOL NO. 65**
TUNER BLOCK SYMBOL NO.70**
SEL BLOCK NO.75**
TV/VCR
POWER
IC6001
IC3001A
IC3002
IC8501
IC4302
IC4303
JK4301
JK4302
JK7501
CN3001
CN5101
A-IN
A-OUT
REMOCON

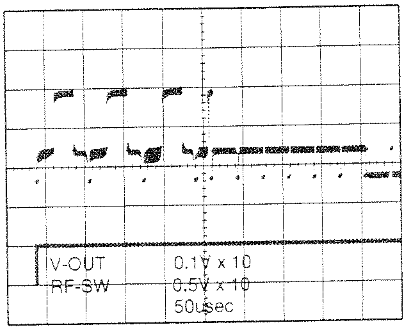
BV4200F01001A

Waveforms

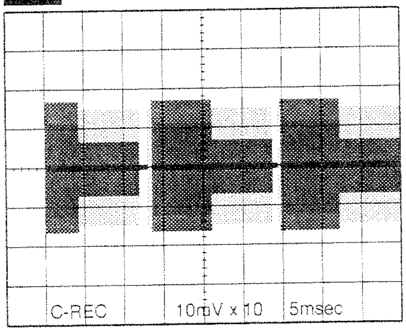
WF1



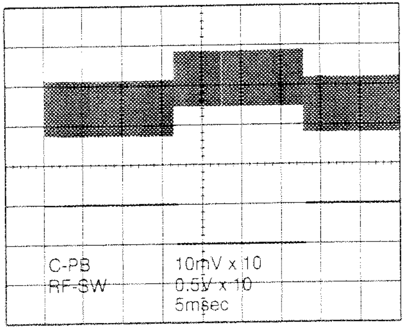
WF1 UPPER **WF2** LOWER



WF3



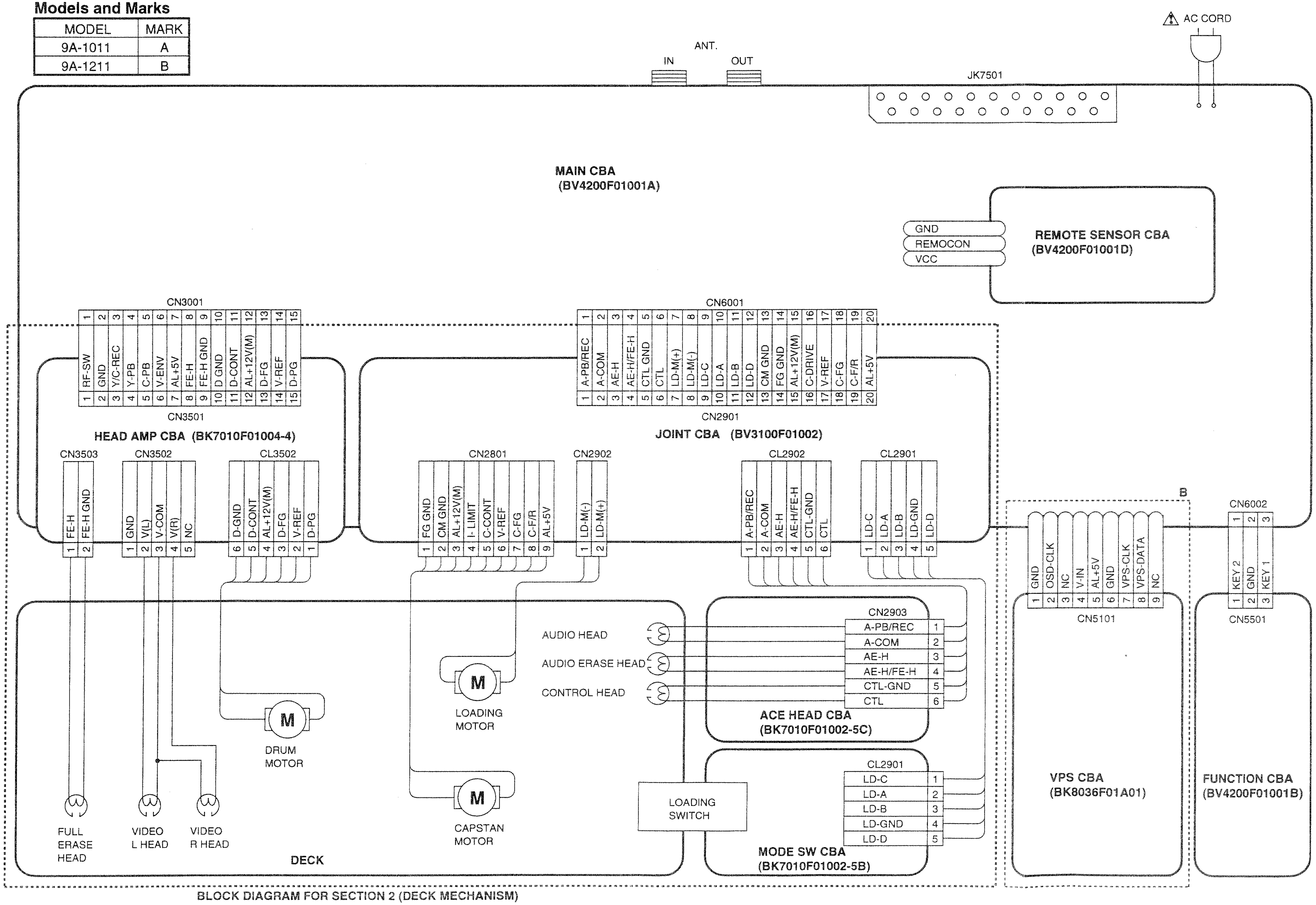
WF5



WIRING DIAGRAM

Comparison Chart of Models and Marks

MODEL	MARK
9A-1011	A
9A-1211	B



AC CORD
ANT.
IN
OUT
JK7501
MAIN CBA
(BV4200F01001A)
GND
REMOCON
VCC
REMOTE SENSOR CBA
(BV4200F01001D)
CN3001
1 RF-SW
2 GND
3 Y/C-REC
4 Y-PB
5 C-PB
6 V-ENV
7 AL+5V
8 FE-H
9 FE-H GND
10 D GND
11 D-CONT
12 AL+12V(M)
13 D-FG
14 V-REF
15 D-PG
CN3501
HEAD AMP CBA (BK7010F01004-4)
CN6001
1 A-PB/REC
2 A-COM
3 AE-H
4 AE-H/FE-H
5 CTL GND
6 CTL
7 LD-M(+)
8 LD-M(-)
9 LD-C
10 LD-A
11 LD-B
12 LD-D
13 CM GND
14 FG GND
15 AL+12V(M)
16 C-DRIVE
17 V-REF
18 C-FG
19 C-F/R
20 AL+5V
CN2901
JOINT CBA (BV3100F01002)
CN3503
1 FE-H
2 FE-H GND
CN3502
1 GND
2 V(L)
3 V-COM
4 V(R)
5 NC
CL3502
6 D-GND
5 D-CONT
4 AL+12V(M)
3 D-FG
2 V-REF
1 D-PG
CN2801
1 FG GND
2 CM GND
3 AL+12V(M)
4 I-LIMIT
5 C-CONT
6 V-REF
7 C-FG
8 C-F/R
9 AL+5V
CN2902
1 LD-M(-)
2 LD-M(+)
CL2902
1 A-PB/REC
2 A-COM
3 AE-H
4 AE-H/FE-H
5 CTL-GND
6 CTL
CL2901
1 LD-C
2 LD-A
3 LD-B
4 LD-GND
5 LD-D
B
CN6002
1 KEY 2
2 GND
3 KEY 1
1 GND
2 OSD-CLK
3 NC
4 V-IN
5 AL+5V
6 GND
7 VPS-CLK
8 VPS-DATA
9 NC
CN5101
CN5501
AUDIO HEAD
AUDIO ERASE HEAD
CONTROL HEAD
CN2903
A-PB/REC 1
A-COM 2
AE-H 3
AE-H/FE-H 4
CTL-GND 5
CTL 6
ACE HEAD CBA
(BK7010F01002-5C)
M
LOADING MOTOR
M
DRUM MOTOR
M
CAPSTAN MOTOR
LOADING SWITCH
CL2901
LD-C 1
LD-A 2
LD-B 3
LD-GND 4
LD-D 5
MODE SW CBA
(BK7010F01002-5B)
FULL ERASE HEAD
VIDEO L HEAD
VIDEO R HEAD
DECK
VPS CBA
(BK8036F01A01)
FUNCTION CBA
(BV4200F01001B)
BLOCK DIAGRAM FOR SECTION 2 (DECK MECHANISM)

SYSTEM CONTROL TIMING CHARTS

Mode SW : LD-A/LD-B/LD-C/LD-D

LD-SW				Symbol	
LD-A	LD-B	LD-C	LD-D		
L	H	H	H	EJ	Eject
H	H	H	H	CL	REW Reel
L	L	H	H	SB	Stop (B)
H	L	H	H	TL	Brake Cancel
H	L	L	H	FB	
H	H	L	H	SF	FF / REW, Stop (A)
H	H	L	L	AU	
H	H	H	L	AL	Play / REC (FS Pause 2 Head Still)
H	L	H	L	SS	4 Head Slow / Still
H	H	H	H	GC	Capstan Reversal
L	H	H	L	RS	RS (REV Reel)

Note:

EJ—— RS : Loading FWD (LM-FWD "H", LM-REW "L")

RS—— EJ : Loading REV (LM-FWD "L", LM-REW "H")

Stop (A) = Loading

Stop (B) = Unloading

Note :

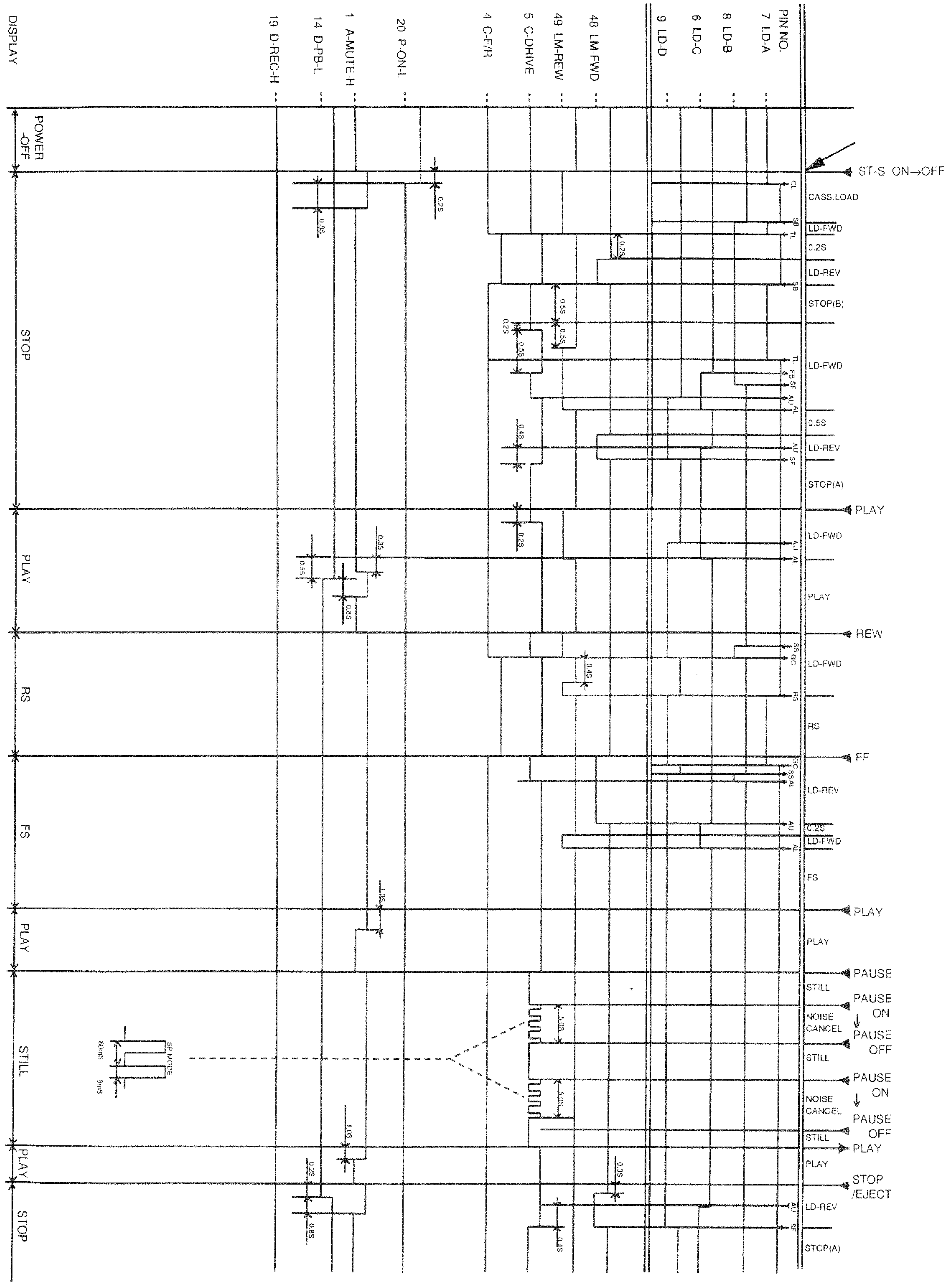
Symbol	Loading Status
EJ	Eject
CL	Eject ~ Loading Completion
SB	REW ~ Stop(B)
TL	Stop(B) ~ Brake Cancel
FB	Brake Cancel ~ FF / REW
SF	FF / REW ~ Stop(A)
AU	Stop(A) ~ Play / REC
AL	Play / REC ~ 4 Head Still / Slow
SS	4 Head Still / Slow ~ Capstan Reversal
GC	Capstan Reversal ~ REW Reel
RS	RS (REV)

Loading Motor/Control

LM-FWD	LM-REW	Description
H	H	Stop
H	L	Loading Forward Rotation
L	H	Loading Reverse Rotation

Capstan Motor/Control

C-DRIVE	C-F/R	Description
L	L/H	Stop, The brake is not applied.
H or HI-Z	L	Capstan, Reel Forward Rotation
H or HI-Z	H	Capstan, Reel Reverse Rotation



PIN NO.
7 LD-A
8 LD-B
6 LD-C
9 LD-D
48 LM-FWD
49 LM-REW
5 C-DRIVE
4 C-F/R
20 P-ON-L
1 A-MUTE-H
14 D-PB-L
19 D-REC-H
DISPLAY
POWER -OFF
STOP
PLAY
RS
FS
PLAY
STILL
PLAY
STOP
ST-S ON→OFF
CASS.LOAD
LD-FWD
0.2S
LD-REV
STOP(B)
LD-FWD
0.5S
LD-REV
STOP(A)
PLAY
LD-FWD
PLAY
REW
LD-FWD
RS
FF
LD-REV
0.2S
LD-FWD
FS
PLAY
PLAY
PAUSE
STILL
PAUSE ON
NOISE CANCEL
PAUSE OFF
STILL
PAUSE ON
NOISE CANCEL
PAUSE OFF
STILL
PLAY
PLAY
STOP /EJECT
LD-REV
STOP(A)

Fig.1

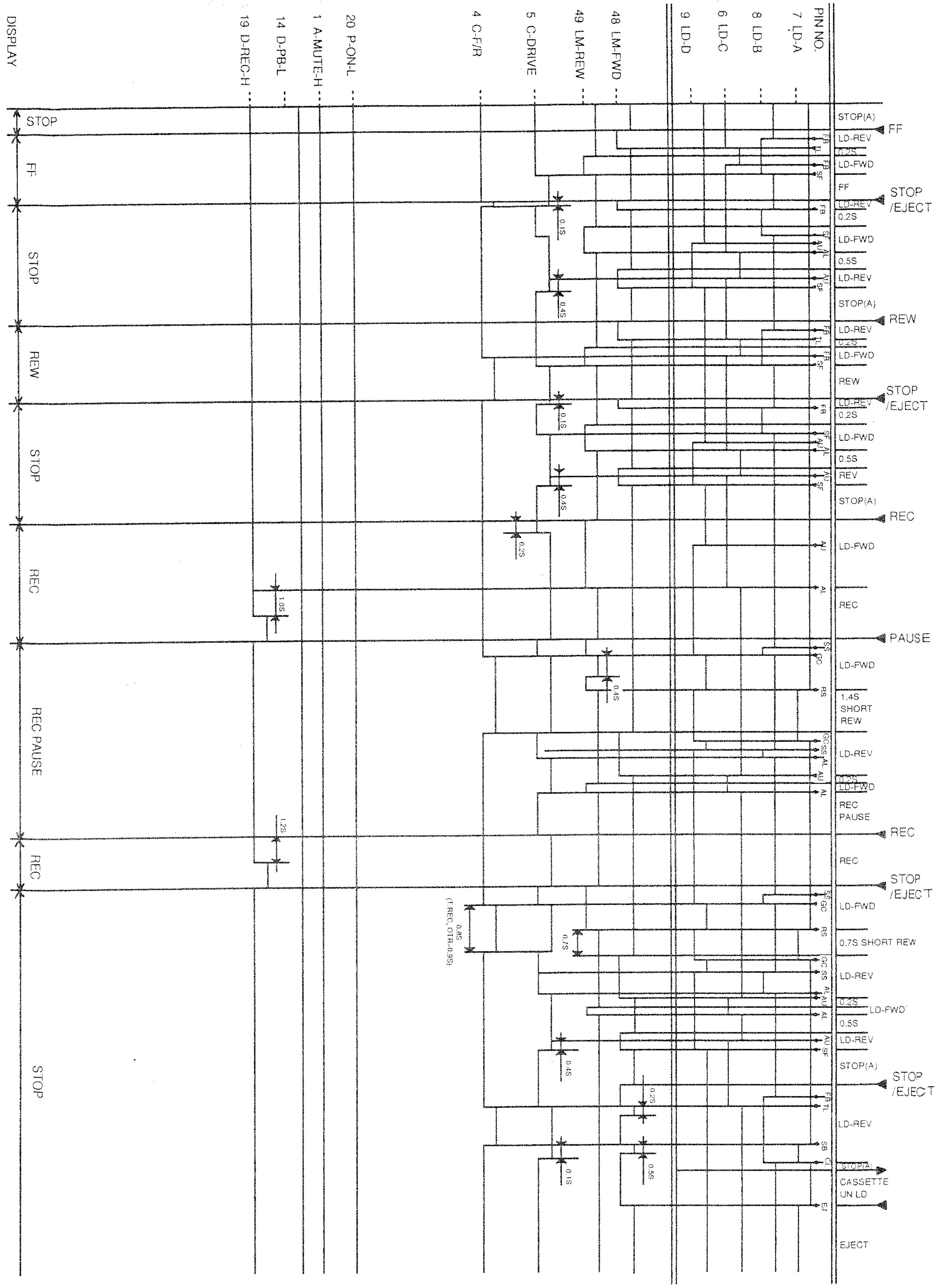

PIN NO.
7 LD-A
8 LD-B
6 LD-C
9 LD-D
48 LM-FWD
49 LM-REW
5 C-DRIVE
4 C-F/R
20 P-ON-L
1 A-MUTE-H
14 D-PB-L
19 D-REC-H
DISPLAY
STOP
FF
STOP
REW
STOP
REC
REC PAUSE
REC
STOP
STOP(A)
FF
LD-REV
0.2S
LD-FWD
FF
STOP
/EJECT
LD-REV
0.2S
LD-FWD
0.5S
LD-REV
STOP(A)
REW
LD-REV
0.2S
LD-FWD
REW
STOP
/EJECT
LD-REV
0.2S
LD-FWD
0.5S
REV
STOP(A)
REC
LD-FWD
REC
PAUSE
LD-FWD
1.4S
SHORT
REW
LD-REV
0.2S
LD-FWD
REC
PAUSE
REC
REC
STOP
/EJECT
LD-FWD
0.7S SHORT REW
LD-REV
0.2S
LD-FWD
0.5S
LD-REV
STOP(A)
STOP
/EJECT
LD-REV
STOP(A)
CASSETTE
UN LD
EJECT
FB
TL
FB
SF
FB
SF
AU
AL
AU
SF
FB
TL
FB
SF
FB
SF
AU
AL
AU
SF
AU
AL
SS
GC
RS
GC
SS
AL
AU
AL
SS
GC
RS
GC
SS
AL
AU
AL
AU
SF
FB
TL
SB
CL
EJ
0.1S
0.4S
0.1S
0.4S
0.2S
1.0S
0.4S
1.2S
0.8S
(T REC, OTR-0.9S)
0.7S
0.4S
0.2S
0.5S
0.1S

Fig.2

IC PIN FUNCTION DESCRIPTION

Pin No.	IN/ OUT	Signal Name	Function	Active Level
1	OUT	A-MUTE-H	AUDIO Mute Signal Output	H
2	OUT	LP-SPL-PB-H	Tape Speed (Playback) LP or SLP mode="H" Output	H/L
3	OUT	REC-CTL	REC-CTL	H/L
4	OUT	C-F/R	Capstan F/R Output	H/L
5	OUT	C-DRIVE	Capstan Drive Output	H/Hi-Z
6	IN	LD-C	Loading SW C Input	H/L
7	IN	LD-A	Loading SW A Input	H/L
8	IN	LD-B	Loading SW B Input	H/L
9	IN	LD-D	Loading SW D Input	H/L
10	-	N.U.	-	-
11	-	N.U.	-	-
12	OUT	ROTA	ROTA Output	H/L
13	OUT	RF-SW	RF-SW Output	H/L
14	OUT	D-PB-L	D-PB Output	L
15	-	N.U.	-	-
16	-	N.U.	-	-
17	OUT	D-V SYNC	Dummy V-Sync Output	H/Hi-Z
18	-	N.U.	-	-
19	OUT	D-REC-H	D-REC Output	H
20	OUT	P-ON-L	P-ON Output	L
21	-	N.U.	-	-
22	IN	AFC	Tuner AFC Voltage Input	A/D
23	IN	V-ENV/REC-SW	Video ENV./REC-SAF-SW Input	A/D
24	IN	END-S	Tape END Position Detect	A/D
25	IN	ST-S	Tape Start Position Detect	A/D
26	-	N.U.	-	-
27	IN	KEY IN-2	A/D Key Data Input	A/D

Pin No.	IN/ OUT	Signal Name	Function	Active Level
28	-	AV_{REF}	AV_{REF} A/D Converter Standard Voltage Input (ALL 5V)	-
29	-	AV_{SS}	AV_{SS} A/D for Converter Power (GND)	-
30	-	AV_{DD}	AV_{DD} A/D for Converter Power (Back Up 5V)	-
31	IN	KEY IN-1	A/D Key Data Input	A/D
32	IN	PG-DELAY/TEST	PG-DELAY	A/D
33	-	N.U.	-	-
34	IN	T-REEL	Take Up Reel Rotation Signal Input	H/L
35	IN	P-DOWN-L	Power Down Detection Input	L
36	IN	C-SYNC C-SYNC Input	PULSE	
37	IN	PB-CTL	PB-CTL Input	PULSE
38	IN	D-PG	D-PG Input	PULSE
39	-	MP	GND	-
40	IN	RESET	System Reset	L
41	-	V_{SS}	V_{SS} (GND)	-
42	-	XTAL	Main Clock 13.300857MHz(IN)	-
43	-	EXTAL	Main Clock	-
44	IN	D-FG	D-FG Input	PULSE
45	IN	C-FG	C-FG Input	PULSE
46	-	N.U.	-	-
47	-	N.U.	-	-
48	OUT	LM-FWD	Loading Motor FWD Output	H
49	OUT	LM-REV	Loading Motor REV Output	H
50	OUT	C-CONT	Capstan Control	PWM
51	OUT	D-CONT	Drum Control	PWM
52	-	N.U.	-	-
53	-	N.U.	-	-

* This function enables you to improve the picture quality when playing back worn cassettes such as those rented from a video shop.

Pin No.	IN/ OUT	Signal Name	Function	Active Level
54	OUT	1G	Display Digit Output	H
55	OUT	2G	Display Digit Output	H
56	OUT	3G	Display Digit Output	H
57	OUT	4G	Display Digit Output	H
58	OUT	5G	Display Digit Output	H
59	OUT	6G	Display Digit Output	H
60	OUT	7G	Display Digit Output	H
61	OUT	8G	Display Digit Output	H
62	OUT	9G	Display Digit Output	H
63	OUT	10G	Display Digit Output	H
64	OUT	A	Display Segment Output	H
65	OUT	B	Display Segment Output	H
66	OUT	C	Display Segment Output	H
67	OUT	D	Display Segment Output	H
68	OUT	E	Display Segment Output	H
69	OUT	F	Display Segment Output	H
70	OUT	G	Display Segment Output	H
71	OUT	H	Display Segment Output	H
72	OUT	I	Display Segment Output	H
73	OUT	J	Display Segment Output	H
74	-	N.U.	-	-
75	-	N.U.	-	-
76	-	N.U.	-	-
77	-	N.U.	-	-
78	-	V_{FDP} (-28V)	V_{FDP} (-28)	-
79	-	N.U.	-	-
80	-	N.U.	-	-
81	-	N.U.	-	-

Pin No.	IN/ OUT	Signal Name	Function	Active Level
82	IN	MESECAM -IN-H	PAL/MESECAM for Select Input	H/L
83	OUT	MESECAM -OUT-H	PAL/MESECAM Select Output PAL="L"/ MESECAM="H"	H
84	OUT	T-DAC	TUNING Voltage Control for PWM Output	PWM
85	IN	REMOCON	Remocon Sensor Input	L
86	-	TEX	SUB CLOCK 32KHz (IN)	-
87	-	TX	SUB CLOCK 32KHz (OUT)	-
88	-	V_{SS}	V_{SS}(GND)	-
89	-	V_{DD}	V_{DD}(BACK UP 5V)	-
90	-	NC(Vpp)	BACK UP 5V	-
91	IN/ OUT	E2PROM- DATA	E2PROM IC Control DATA	H/L
92	OUT	E2PROM- CLK	E2PROM IC Control CLOCK	H/L
93	OUT	BG/DK	BG/DK for Switching Output BG="H", DK="L"	H
94	OUT	VL	TUNER BAND Switching Output	L
95	OUT	VH	TUNER BAND Switching Output	L
96	OUT	U	TUNER BAND Switching Output	L
97	OUT	LP-H	LP-H Output	H
98	OUT	INSEL	INPUT SELECT	H/L
99	-	N.U.	-	-
100	-	N.U.	-	-

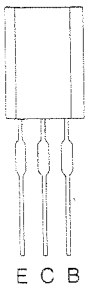
Notes:

Abbreviation for Active Level

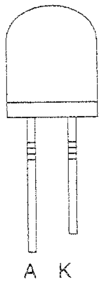
PWM – Pulse Wide Modulation,

A/D -- Analog - Digital Converter

LEAD IDENTIFICATION

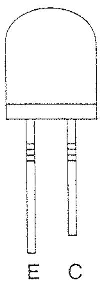


2SA608SP(E,F)
2SC536SP(E,F)
2SC3400
2SC2839(E,F, G)
KRC103M
KRA103M
2SA1346
KSR2205
2SA1654
KSR2203
KRC106M
KSR1214
2SC4133
2SC-2120-Y
KSR1203
KTA1267(Y,GR)
KSA1175(Y,G)
KTC3199(Y,GR, BL)
KSC2785(Y,G, L)
KTA1266(Y,GR)
2SA1317(S,T)
2SD400 (F)
KTC3193(Y)
KRA109M
KSR2208
2SA1347
2SD734F-NP-AQ
2SD734G-NP-AQ
KTC3203(Y)

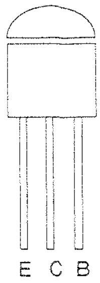


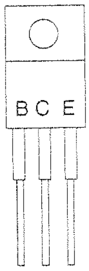
SID1K10CXM
LN66A.FN
SLR-932C-20-AB

PT380FAB

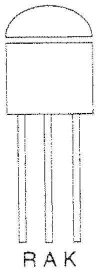


2SC4204
2SC3576
2SC3331(T,U)



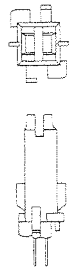


2SC4517
2SC3866
2SC5239

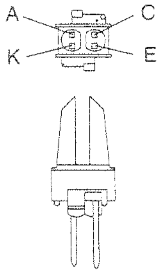


KIA431
KA431Z
AN1431T-(NTSC)
L5431

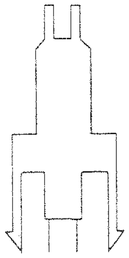
SG-224



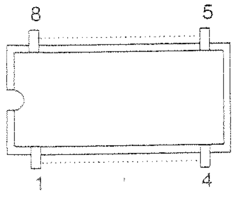
GP1S38



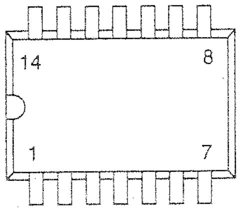
SG-231



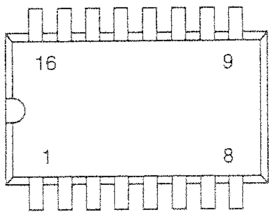
24LC01B/P
ST24C01B1
X24C01AP



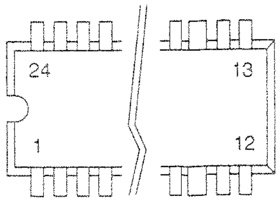
SDA5642
KA339
KIA339P
KA324
KIA324P-DIP-14
NJM2901N



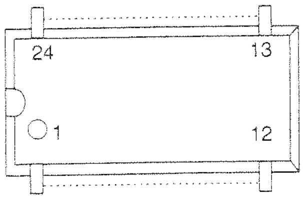
NJU4052BD
µPD4052BC
TC4052BP
HEF4052BP



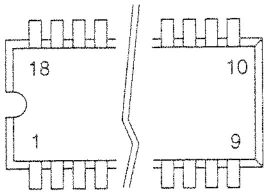
LA7286



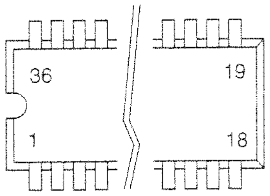
LC89972M



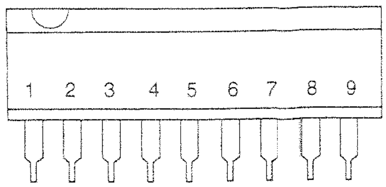
SAA4700



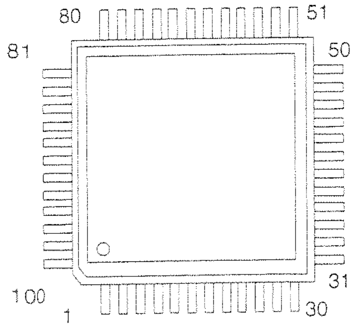
LA7347



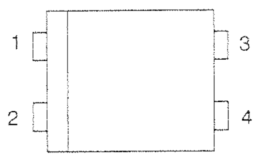
TA7291S



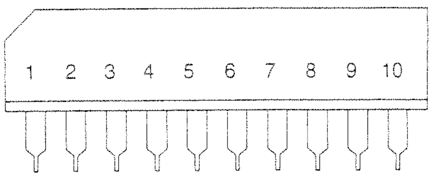
QSMQB0RSN039


80
51
81
50
100
1
31
30

PC120F
PC120
PS2561(1M,1D,1H,1W)



LB1641


1 2 3 4 5 6 7 8 9 10

Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference

DECK MECHANISM SECTION

VIDEO CASSETTE RECORDER

9A-1011 / 9A-1211

Sec. 2: Deck Mechanism Section

- Standard Maintenance
- Alignment for Mechanism
- Disassembly/Assembly of Mechanism
- Front Loading Assembly
- Alignment Procedures of Mechanism
- Schematic Diagrams
- CBA' s

TABLE OF CONTENTS

Standard Maintenance 2-1-1
Service Fixtures and Tools 2-2-1
Mechanical Alignment Procedures 2-3-1
Disassembly / Assembly Procedures of Deck Mechanism 2-4-1
Front Loading Assembly 2-4-9
Alignment Procedures of Mechanism 2-4-12
Schematic Diagrams and CBA' s 2-5-1

STANDARD MAINTENANCE

Service Schedule of Components

H: Hours ○: Check ●: Change

Deck		Periodic Service Schedule			
Ref. No.	Part Name	1,000 H	2,000 H	3,000 H	4,000 H
B2	Cylinder Assembly	○	●	○	●
B3	Loading Motor			●	
B6	Pinch Roller Arm Assembly		●		●
B8	Pulley Assembly		●		●
B21	Loading Belt		●		●
B27	Band Brake Assembly		●		●
B28	Main Brake S Assembly		●		●
B29	Main Brake T Assembly		●		●
B30	T Brake Arm Assembly		●		●
B31	ACE Head Assembly			●	
B32, B339	Reel Assembly			●	
B37	Capstan Motor		●		●
B52	Capstan Belt		●		●
B54	Ground Brush Assembly			●	
B73	FE Head				
B132	Clutch Assembly		●		●
B133	Arm Idler Assembly		●		●

Note:

1. Clean all parts for the tape transport (Upper Drum with Video Head / Pinch Roller / Audio Control Head / Full Erase Head) using 90% Isopropyl Alcohol.
2. After cleaning the parts, do all DECK ADJUSTMENTS.
3. For the reference numbers listed above, refer to Deck Exploded Views.

Cleaning

Cleaning of Video Head

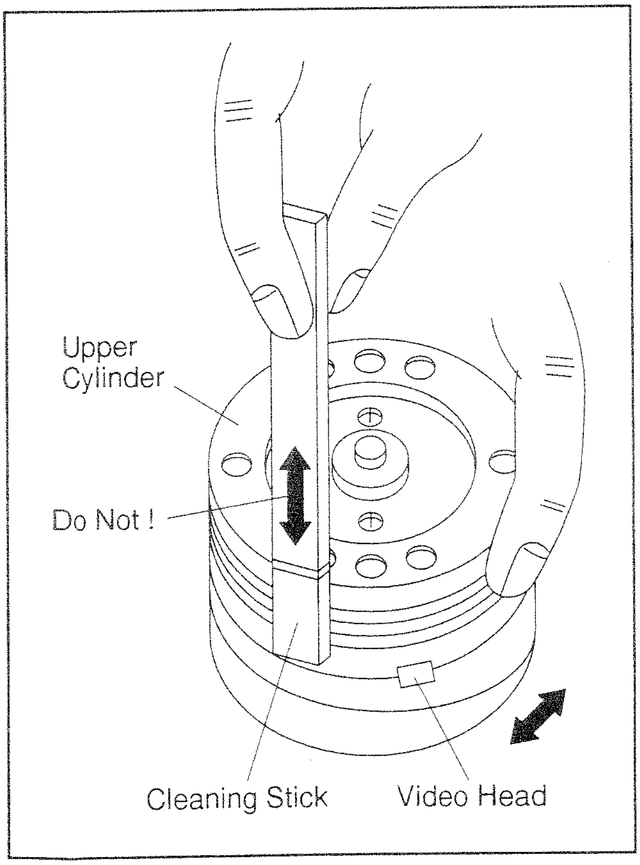
Clean the head with a head cleaning stick or chamois skin.

Procedure

1. Remove the top cabinet.
2. Put on a glove (thin type) to avoid touching the upper and lower drum with your bare hand.
3. Put a few drops of 90% Isopropyl alcohol on the head cleaning stick or on the chamois skin and, by slightly pressing it against the head tip, turn the upper drum to the right and to the left.

Notes:

1. The video head surface is made of very hard material, but since it is very thin, avoid cleaning it vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit.
3. Do not reuse a stained head cleaning stick or a stained chamois skin.



Cleaning of Audio Control Head

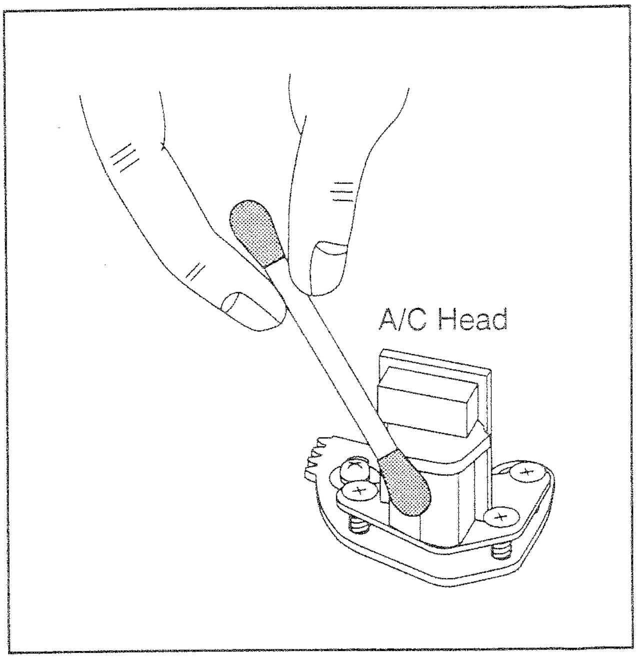
Clean the head with a cotton swab.

Procedure

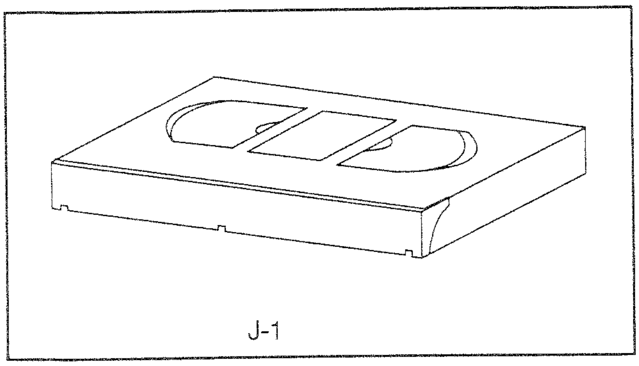
1. Remove the top cabinet.
2. Dip the cotton swab in 90% isopropyl alcohol and clean the audio control head. Be careful not to damage the upper drum and other tape running parts.

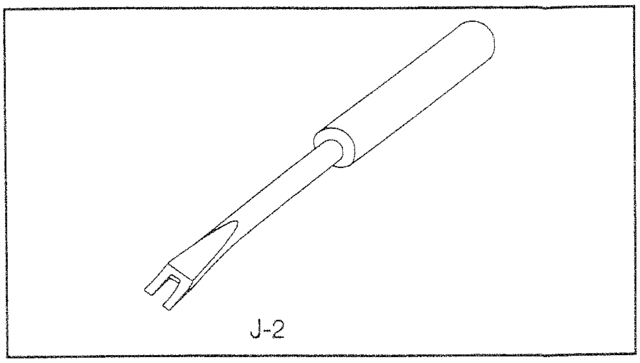
Notes:

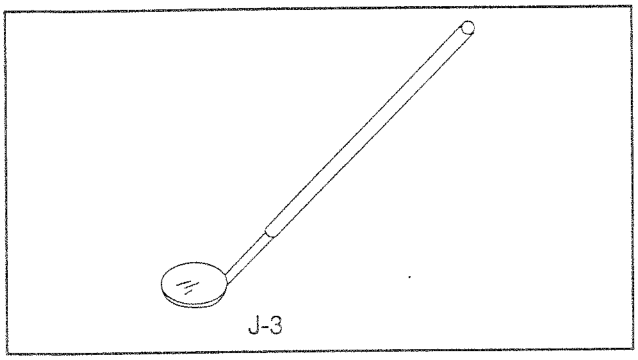
1. Avoid cleaning the audio control head vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit or damage may occur.

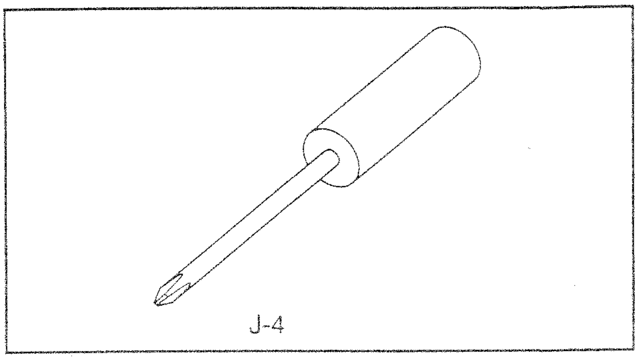


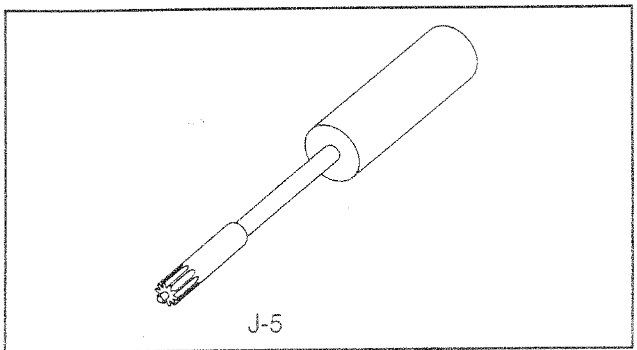
SERVICE FIXTURE AND TOOLS

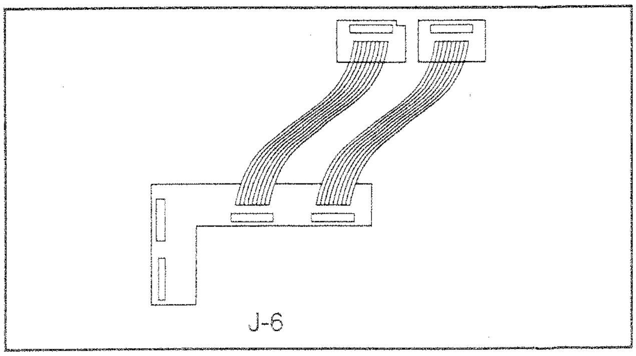

J-1


J-2


J-3


J-4


J-5


J-6

Ref. No.	Name	Part No.	Adjustment
J-1	Alignment Tape	F6-N F6-NS (LP mode)	Azimuth and X Value Adjustment of Audio Control Head / Adjustment of Envelope Waveform
J-2	Guide Roller Adj.Screwdriver	FSJ-0006	Guide Roller
J-3	Mirror	FSJ-0004	Tape Transportation Check
J-4	Azimuth Adj.Screwdriver	Available Locally	A/C Head Height
J-5	X Value Adj.Screwdriver	FSJ-0007	X Value
J-6	Deck Extention Cable	N1091XA	All Mechanical and Electrical Adjustments

Note:
Before starting any adjustment, take the Deck Assembly out of the cabinet and use J-6 to connect the Deck Assembly with the Main CBA.

MECHANICAL ALIGNMENT PROCEDURES

Explanation of alignment for the tape to correctly run starts on the next page. Refer to the information below on this page if a tape gets stuck, for example, in the mechanism due to some electrical trouble of the unit.

Service Information

A. Method for Manual Tape Loading/Unloading

To load a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Cover.
3. Insert a cassette tape. Though the tape will not be automatically loaded, make sure that the cassette tape is all the way in at the inlet of the Cassette Holder. To confirm this, lightly push the cassette tape further in and see if the tape comes back out, by a spring motion, just as much as you have pushed in.
4. Turn the Pulley Assembly in the appropriate direction shown in Fig. M1 until the cassette tape is fully loaded. By turning the Pulley Assembly, you are turning the cam indicated in this figure. However, movement of the cam will be very slow. Allow a minute or two to complete this task.

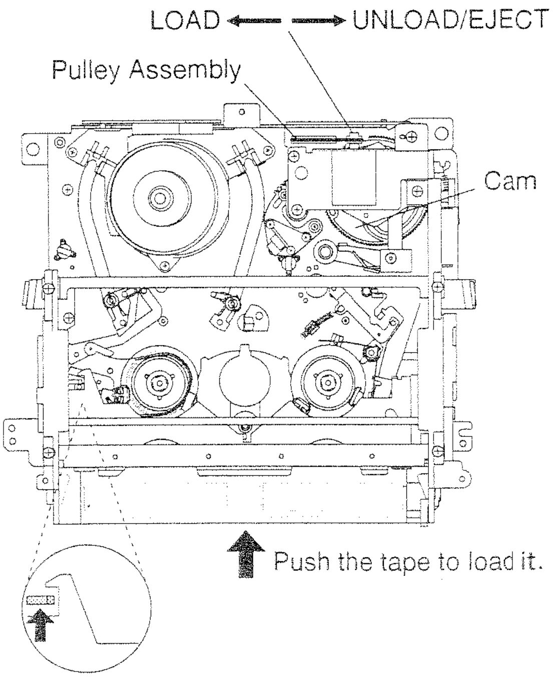
To unload a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Cover.
3. Turn the Pulley Assembly in the appropriate direction shown in Fig. M1 until the cassette tape is unloaded. When doing this, gently turn the Capstan Motor in the direction shown in Fig. M2 so that the tape hanging out will be taken back into the cassette case.
   By turning the Pulley Assembly, you are turning the cam indicated in Fig. M1. However, movement of the cam will be very slow. Allow a minute or two to complete this task.

B. Method to place the Cassette Holder in the tape-loaded position without a cassette tape

1. Disconnect the AC Plug.
2. Remove the Top Cover.
3. Turn the Pulley Assembly in the appropriate direction shown in Fig. M1 until the Cassette Holder comes to the tape-loaded position. Allow a minute or two to complete this task.

Top View



Push the tab gently to unlock when loading without a cassette.

Fig. M1

Bottom View

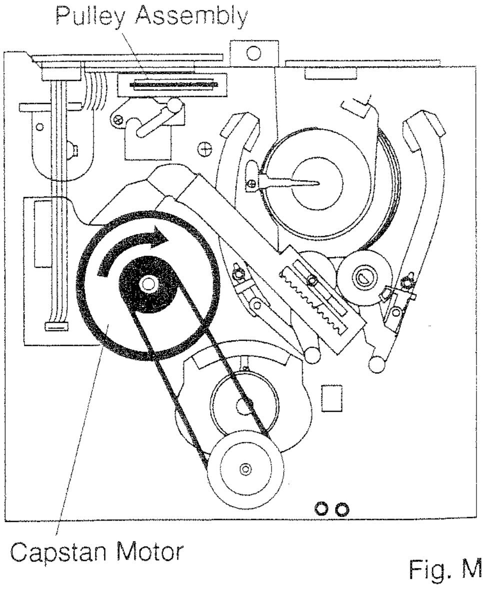


Fig. M2

1. Tape Interchangeability Alignment

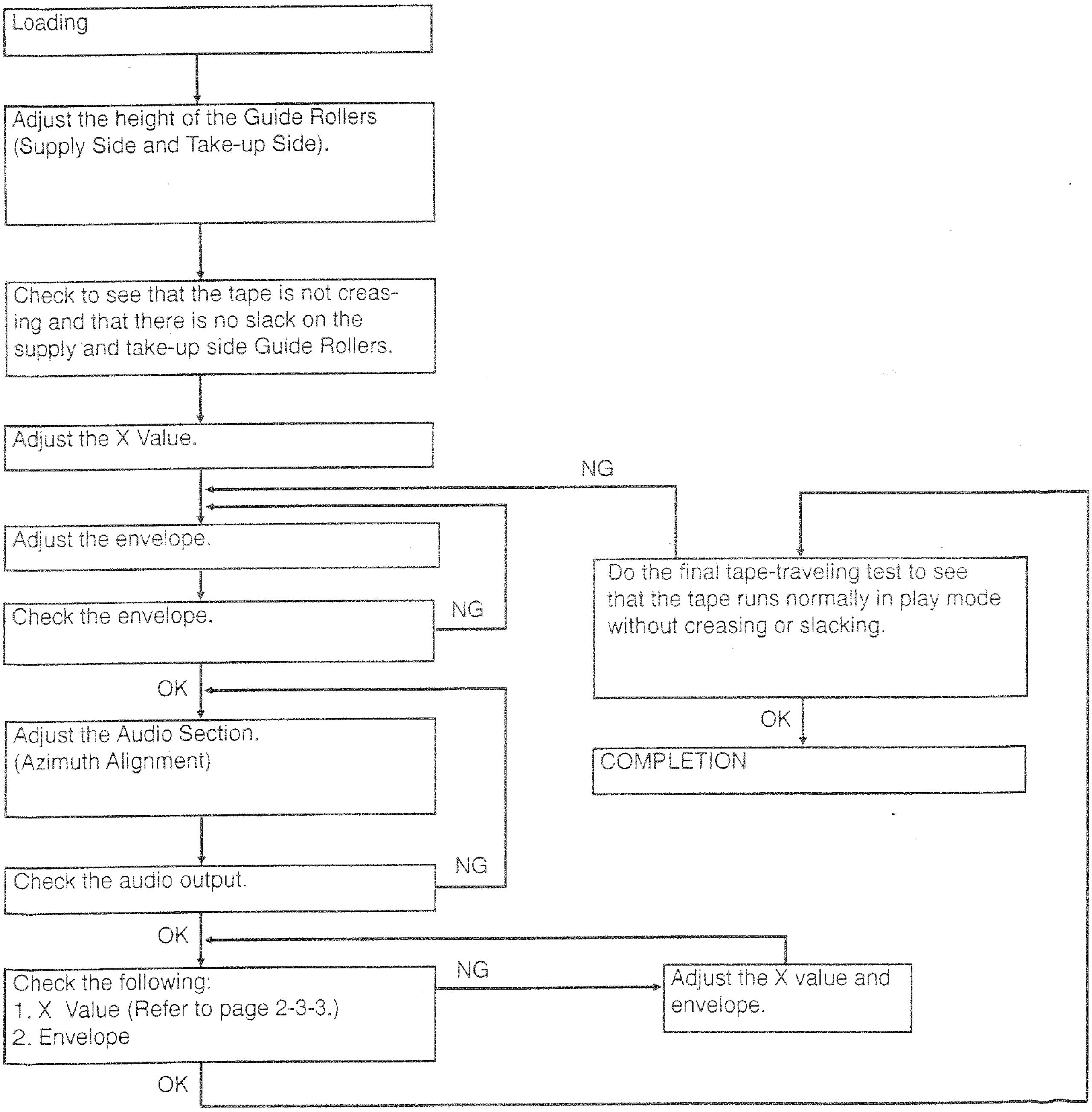
Note: To do these alignment procedures, make sure that the Tracking Control Circuit is set to the center position every time a tape is loaded or unloaded. (Refer to page 2-3-4.)

Equipment required :

Dual Trace Oscilloscope
VHS Alignment Tape (F6-A, F6-N)
Guide Roller Adj. Screwdriver
X-Value Adj. Screwdriver

Note: Before starting this Mechanical Alignment, do all Electrical Adjustment procedures.

Flowchart of Alignment for tape traveling


Loading
Adjust the height of the Guide Rollers (Supply Side and Take-up Side).
Check to see that the tape is not creasing and that there is no slack on the supply and take-up side Guide Rollers.
Adjust the X Value.
NG
Adjust the envelope.
Check the envelope.
NG
OK
Do the final tape-traveling test to see that the tape runs normally in play mode without creasing or slacking.
OK
COMPLETION
Adjust the Audio Section. (Azimuth Alignment)
Check the audio output.
NG
OK
Check the following:
1. X Value (Refer to page 2-3-3.)
2. Envelope
NG
Adjust the X value and envelope.
OK

NG = Not Good

1-A. Preliminary Checking and Alignment of Tape Path

Purpose:

To make sure that the tape path is well stabilized.

Symptom of Misalignment:

If the tape runs unstable, the tape will be damaged.

Note: Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

1. Play back a cassette tape and check to see that the tape runs without creasing at Guide Rollers [2] and [3], and at points A and B on the lead surface. (Refer to Fig M3 and M4)
2. If creasing is apparent, align the height of the guide rollers by turning the top of Guide Rollers [2] and [3] with a Guide Roller Adj. Screwdriver. (Refer to Fig. M3 and M5)
   Note: Before turning the Guide Rollers, loosen the Lock Screw using a lock screwdriver.

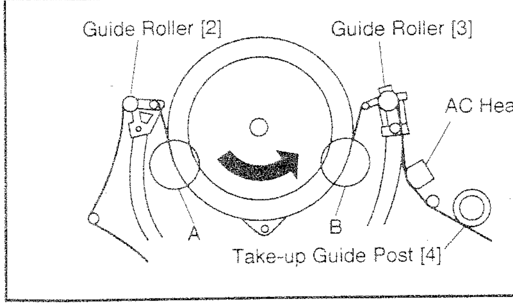

Guide Roller [2]
Guide Roller [3]
AC Head
A
B
Take-up Guide Post [4]

Fig. M3

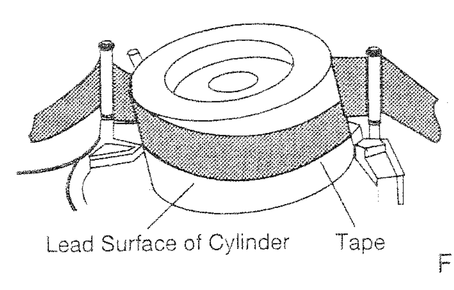

Lead Surface of Cylinder
Tape

Fig. M4

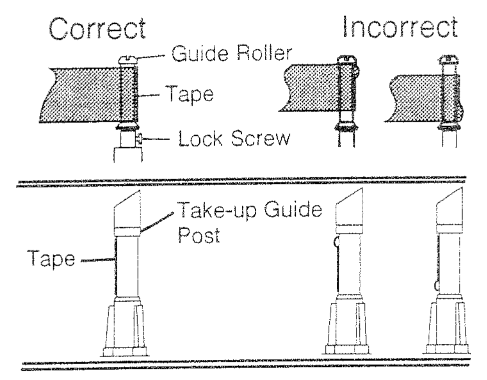

Correct
Incorrect
Guide Roller
Tape
Lock Screw
Take-up Guide Post
Tape

Fig. M5

3. Check to see that the tape runs without creasing at Take-up Guide Post [4] or without snaking between Guide Roller [3] and AC Head. (Fig. M3 and M5)
4. If creasing or snaking is apparent, adjust the Tilt Adj. Screw of the AC Head. (Fig. M6)

1-B. Azimuth Alignment of Audio/Control Head

Purpose:

To correct the Azimuth alignment so that the Audio/Control/Erase Head angle meets tape tracks properly.

Symptom of Misalignment:

If the position of the Audio/Control/Erase Head is not properly aligned, the Audio S/N Ratio or Frequency Response will be poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Play back the alignment tape (F6-N) and confirm that the audio signal output level is 6 kHz.
3. Adjust Azimuth Adj. Screw so that the output level on the AC Voltmeter or the waveform of the oscilloscope is at maximum. (Fig. M6)

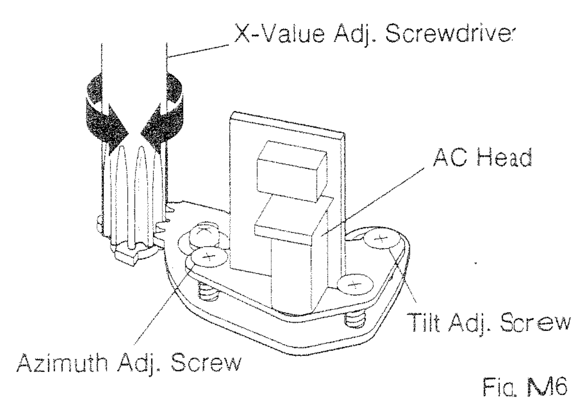

X-Value Adj. Screwdriver
AC Head
Tilt Adj. Screw
Azimuth Adj. Screw

Fig. M6

1-C. X Value Alignment

Purpose:

To align the Horizontal Position of the Audio/Control Head.

Symptom of Misalignment:

If the Horizontal Position of the Audio/Control Head is not properly aligned, maximum envelope cannot be obtained at the Neutral mode of the Tracking Control Circuit.

1. Set the Tracking Control Circuit to the center position by pressing CH UP and DOWN buttons on VCR simultaneously.

2. Connect the oscilloscope to TP (C-PB) and TP (CTL) on the Main CBA. Use TP (RF-SW) as a trigger.
3. Play back the Gray Scale of the Alignment Tape (F6-N) and confirm that the PB FM signal is present.
4. Use the X-Value Adj. Screwdriver so that the PB FM signal at TP (C-PB) or TP (AUDIO OUT) is maximum. (Fig.M6)
   Note: AUDIO OUT is printed as "A-OUT" on the Main CBA.
5. Press CH UP button on VCR until CTL waveform is shifted by approx. +2msec. Make sure that the envelope is simply attenuated (shrinks in height) during this process so that you will know the envelope has been at its peak.
6. Press CH DOWN button on VCR until CTL waveform is shifted from its original position (not the position achieved in step 5 just above, but the position of CTL waveform until step 4) by approximately -2msec. Make sure that the envelope is simply attenuated (shrinks in height) once CTL waveform passes its original position and is further brought in the minus direction.
7. Set the Tracking Control Circuit to the center position by pressing CH UP and DOWN buttons on VCR simultaneously.

1-D. Final Checking/Adjustment of Envelope Waveform

Purpose:

To achieve a satisfactory picture and precise tracking.

Symptom of Misalignment:

If the envelope output is poor, noise will appear in the picture. The tracking will then lose precision and the playback picture will be distorted by any slight variation of the Tracking Control Circuit.

1. Set the Tracking Control Circuit to the center position by pressing both CH UP and DOWN buttons on VCR simultaneously.
2. Connect the oscilloscope to TP (C-PB) on the Main CBA. Use TP (RF-SW) as a trigger.
3. Play back the Gray Scale on the Alignment Tape (F6-N). Adjust the height of Guide Rollers [2] and [3] (Fig.M3) watching the oscilloscope display so that the envelope becomes as flat as possibile. To do this adjustment, turn the top of the Guide Roller with the Guide Roller Adj. Screwdriver.
4. When the envelope is as shown in Fig. M7, adjust the height of Guide Roller [2] (Refer to Fig.M3) so that the waveform looks like the one shown in Fig. M9.
5. When the envelope is as shown in Fig. M8, adjust the height of Guide Roller [3] (Refer to Fig.M3) so that the waveform looks like the one shown in Fig. M9.
6. When Guide Rollers [2] and [3] (Refer to Fig.M3) are aligned properly, there is no envelope drop either at the beginning or end of track as shown in Fig. M9.

Note: Upon completion of the adjustment of Guide Rollers [2] and [3] (Refer to Fig. M3), tighten the Lock Screws on these Guide Rollers [2] and [3], using a lock screwdriver. Then check the X Value by pushing the Tracking Control Up or Down buttons alternately, to check the symmetry of the envelope. If required, redo the "X Value Alignment."

Dropping envelope level at the beginning of track.

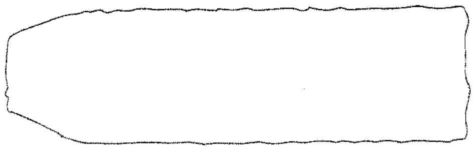


Fig. M7

Dropping envelope level at the end of track.

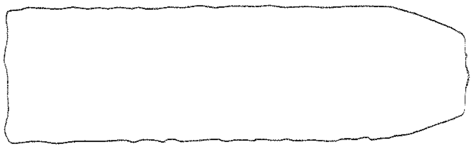


Fig. M8

Envelope is adjusted properly. (No envelope drop)

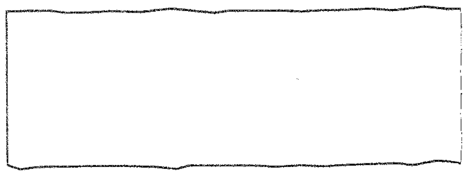


Fig. M9

DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Main Mechanism

Before following the procedures described below, be sure to remove the deck assembly from the cabinet. (Refer to CABINET DISASSEMBLY INSTRUCTIONS in Section 1.)

All the following procedures, including those for adjustment and replacement of parts, should be done in Eject mode; see the positions of [33] and [34] in Fig. DM3 on page 2-4-4. When reassembling, follow the steps in reverse order.

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[1]	[1]	Front Loading Assembly	T	DM1	2(S-1), (S-2), *(P-1)	
[2]	[1]	Motor Holder Assembly	T	DM3 DM5 DM6	3(S-4) Loading Belt	(+) Refer to Alignment Sec. Pg. 2-4-12.
[3]	[1]	Loading Motor Assembly	T	DM2 DM3 DM5	2(S-5), CN2902	
[4]	[1]	Cassette Drive Lever Assembly	T	DM3 DM5		(+) Refer to Alignment Sec. Pg. 2-4-12.
[5]	[1]	Pinch Roller Arm Assembly	T	DM3 DM5	(C-1) Pinch Roller Spring	Refer to Alignment Sec. Pg. 2-4-12.
[6]	[1]	Pinch Arm Assembly	T	DM3 DM5		Refer to Alignment Sec. Pg. 2-4-12.
[7]	[7]	Mode SW CBA	B	DM4 DM8	*(L-1), Stopper Boss	
[8]	[8]	Joint CBA	T/B	DM2 DM3 DM4 DM7 DM8	(S-6), CN2801 CN2902, *CL2901 CL2902	
[9]	[1]	Cam	T	DM3 DM5		(+) Refer to Alignment Sec. Pg. 2-4-12.
[10]	[1]	Pulley Assembly	T	DM3 DM6	(W-1), Loading Belt	(+)
[11]	[11]	Head Amp CBA	T/B	DM2 DM3 DM4 DM8	(S-7), (S-8), CN02, CN03, CL02	
[12]	[12]	Arm Idler Assembly	T	DM3 DM9	Clutch Bushing	(+)
[13]	[13]	Clutch Assembly	B	DM4 DM9	(C-2), (W-2) Capstan Belt	
[14]	[13]	Capstan Motor Unit	B	DM4 DM10	3(S-9)	
[15]	[1]	M Lever Holder	T	DM3 DM11	(S-10)	
[16]	[1]	Kick Arm Holder	B	DM4 DM11	Kick Arm Spring	
[17]	[16]	Kick Arm	B	DM4 DM11	Bushing	
[18]	[18]	Mode Change Lever	T	DM3 DM12	*2(L-2)	(+)
[19]	[1]	Main Lever Assembly	T	DM3 DM15	*(L-3)	
[20]	[20]	Tape Guide Assembly	T	DM3 DM15	*(P-2), *(L-4)	Keep the distance specified in Fig. DM15.
[21]	[21]	ACE Head Assembly	T	DM3 DM14	2(S-11)	
[22]	[22]	Tension Lever Sub Assembly	T B	DM3 DM13 DM22	*(L-5) *(P-6)	
[23]	[22]	Band Brake Sub Assembly	T	DM3 DM13	(S-12), *(L-6)	
[24]	[18]	M Brake (S) Lever	T	DM3 DM16		

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[25]	[18]	M Brake (S)	T	DM3 DM16	*(P-3), *(L-7)	When reassembling, hook the spring (P-3) after installation of Mode Change Lever.
[26]	[18]	S Brake Arm	T	DM3 DM16	*(P-4), *(L-8)	When reassembling, hook the spring (P-4) after installation of Mode Change Lever.
[27]	[18]	M Brake (T) Assembly	T	DM3 DM16		
[28]	[18]	T Brake Arm Assembly	T	DM3 DM16	*(P-5)	When reassembling, hook the spring (P-5) after installation of Mode Change Lever.
[29]	[18]	Reel Base Assembly T	T	DM3 DM17	Poly Slider Washer	(+)
[30]	[18]	Reel Base Assembly S	T	DM3 DM17	Poly Slider Washer	(+)
[31]	[31]	Ground Brush Assembly	B	DM4 DM18 DM19	(S-13)	Refer to Alignment Sec. Pg. 2-4-12.
[32]	[11],[31] Only	Cylinder Assembly	T	DM3 DM18	3(S-14)	Refer to Alignment Sec. Pg. 2-4-12.
[33]	[1]	Moving Guide S Assembly	T	DM3 DM20		
[34]	[1]	Moving Guide T Assembly	T	DM3 DM20		
[35]	[1] Only	FE Head	T	DM3 DM20	(S-15)	
[36]	[36]	Main Prism	T	DM3 DM20	(S-16)	
[37]	[1]	Loading Arm M Assembly	B	DM4 DM21	(C-3)	(+) Refer to Alignment Sec. Pg. 2-4-12.
[38]	[1]	Loading Gear A	B	DM4 DM21		(+) Refer to Alignment Sec. Pg. 2-4-12.
[39]	[1]	Loading Gear B	B	DM4 DM21		(+) Refer to Alignment Sec. Pg. 2-4-12.
[40]	[40]	Spring Supporter	B	DM4 DM22	(S-17)	
[41]	[40]	BT Drive Arm	B	DM4 DM22	(S-18), *(P-6), *(P-7)	
[42]	[42]	Rec Arm	B	DM4 DM22	(S-19)	
[43]	[42]	Reel Drive Arm	B	DM23	(S-20), (C-4) Drive Arm Roller *(P-8)	
[44]	[42]	Holder Kick Arm	B	DM23	*(P-9)	
[45]	[45]	Cleaning Head	T	DM3		

① ② ③ ④ ⑤ ⑥ ⑦

①: Follow steps in sequence. When reassembling, follow the steps in reverse order.
These numbers are also used as identification (location) No. of parts in the figures.

②: Indicates the part to start disassembling with in order to disassemble the part in column (1).

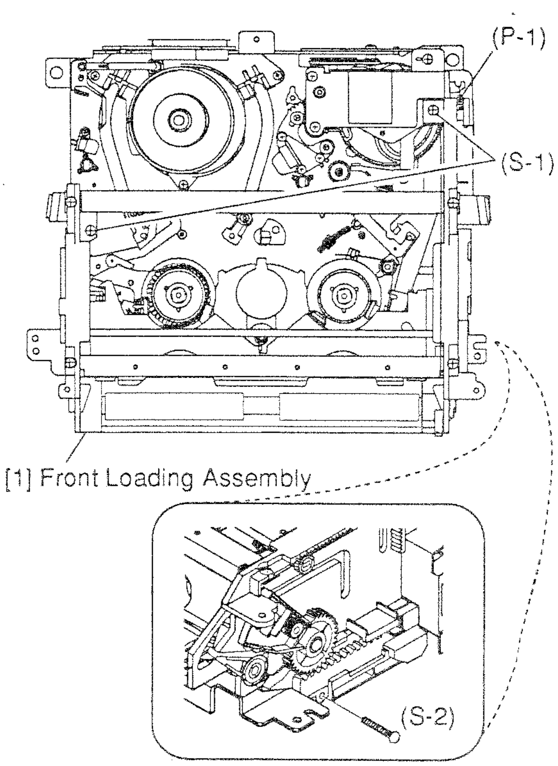
③: Name of the part

④: Location of the part
T=Top B=Bottom R=Right L=Left

⑤: Figure Number

⑥: Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, W=Washer, C=Cut Washer, S=Screw
L=Locking Tab
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(C-2) = two Cut Washers (C-2)
2(L-2) = two Locking Tabs (L-2)

⑦: Adjustment Information for Installation
(+): Refer to Deck Exploded Views for lubrication information.



To remove Front Loading Assembly:

1. Remove 3 screws (S-1) and (S-2).
2. Unhook spring (P-1).
3. Lift Assembly up carefully.

Fig. DM1

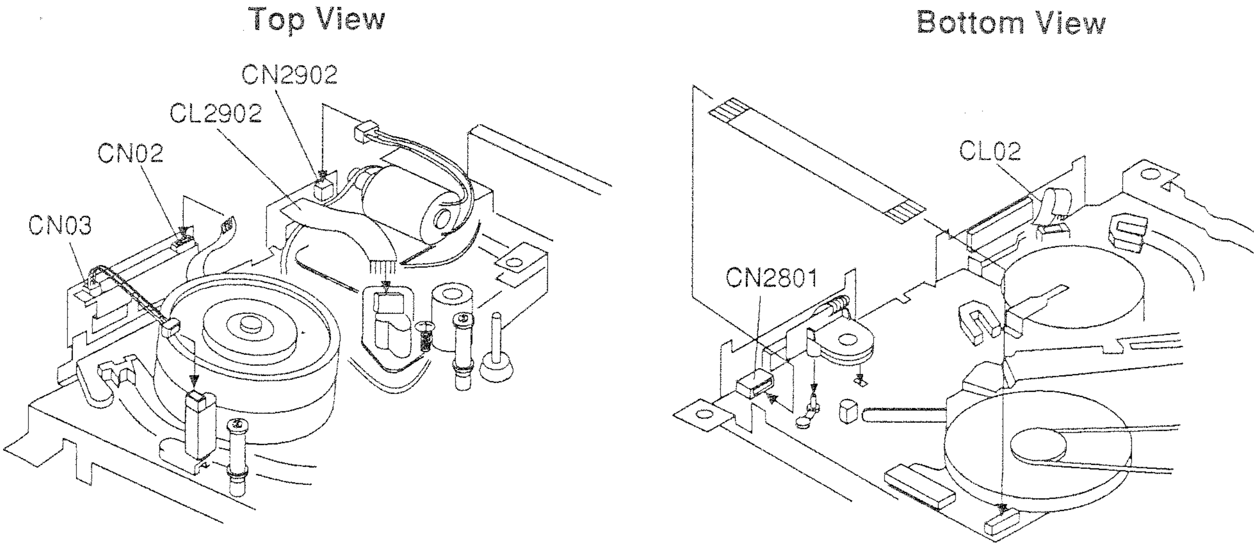


Fig. DM2

Top View

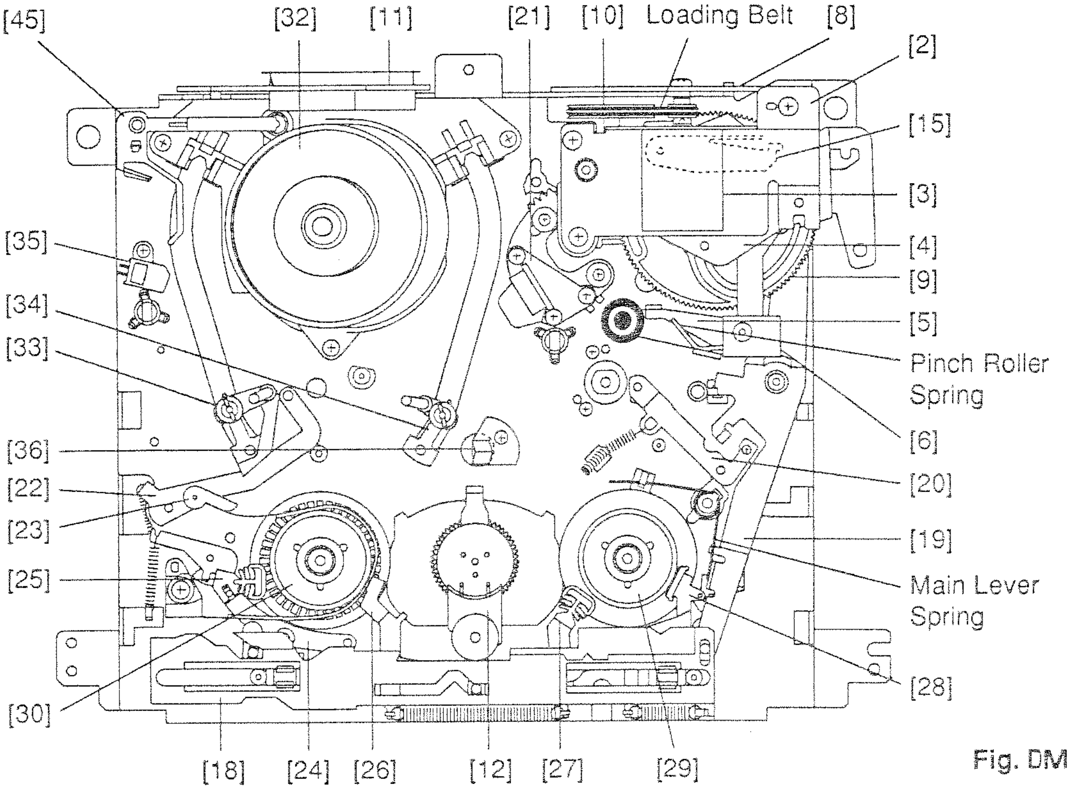

[45]
[32]
[11]
[21]
[10]
Loading Belt
[8]
[2]
[15]
[3]
[4]
[9]
[5]
Pinch Roller Spring
[6]
[20]
[19]
Main Lever Spring
[28]
[35]
[34]
[33]
[36]
[22]
[23]
[25]
[30]
[18]
[24]
[26]
[12]
[27]
[29]

Fig. DM3

Bottom View

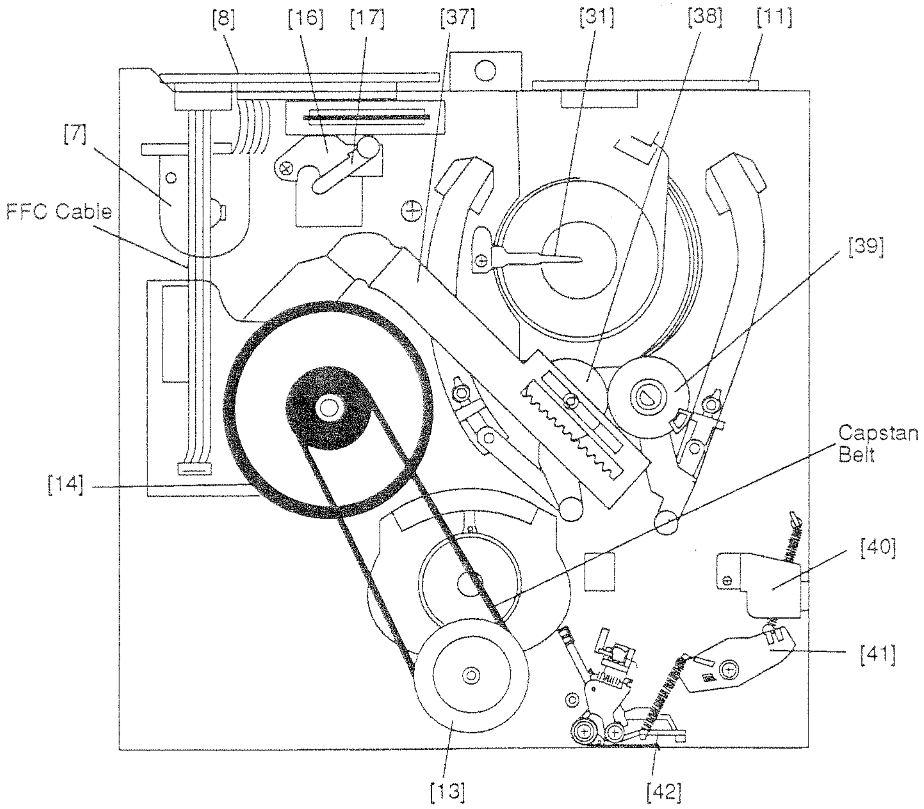

[8]
[16]
[17]
[37]
[31]
[38]
[11]
[7]
FFC Cable
[39]
[14]
Capstan Belt
[40]
[41]
[13]
[42]

Fig. DM4

When disassembling, unhook Pinch Roller Spring as shown by the arrow. With this spring unhooked, [5] and [6] can be removed from the chassis more easily.

When reassembling [2] through [6] and [9], refer to the Alignment Section, Pg. 2-4-12.

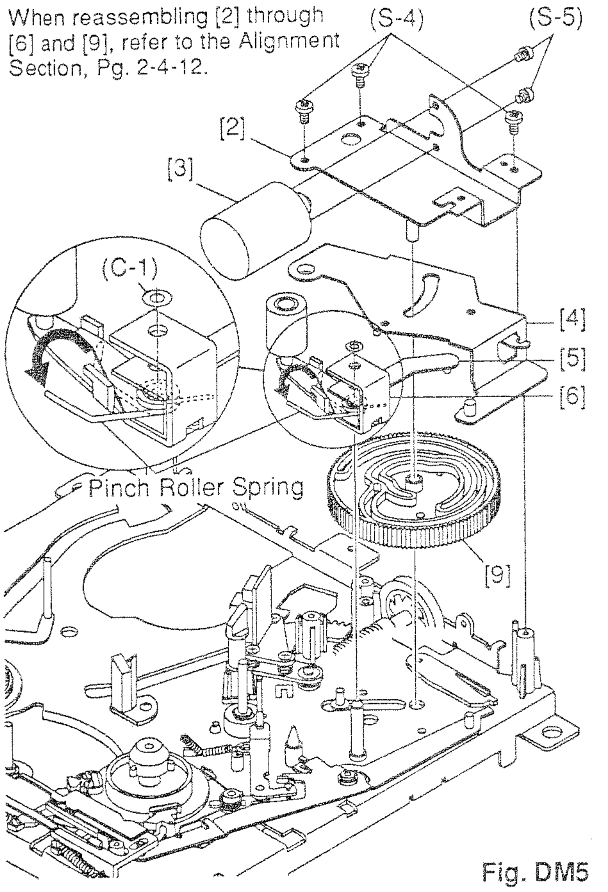
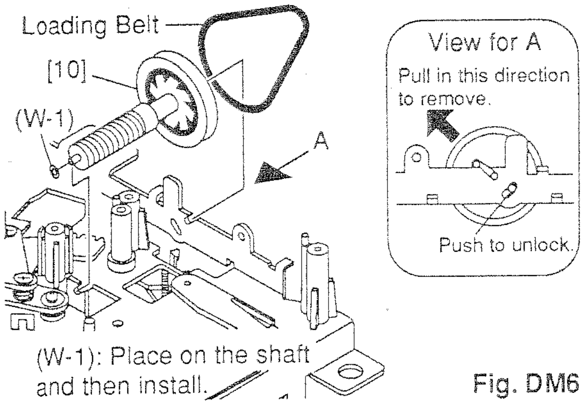

(S-4)
(S-5)
[2]
[3]
(C-1)
[4]
[5]
[6]
Pinch Roller Spring
[9]

Fig. DM5


Loading Belt
[10]
(W-1)
A
View for A
Pull in this direction to remove.
Push to unlock.

(W-1): Place on the shaft and then install.

Fig. DM6

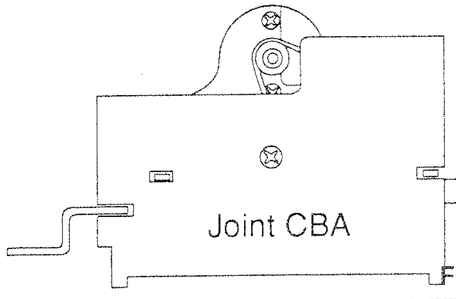


Fig. DM7

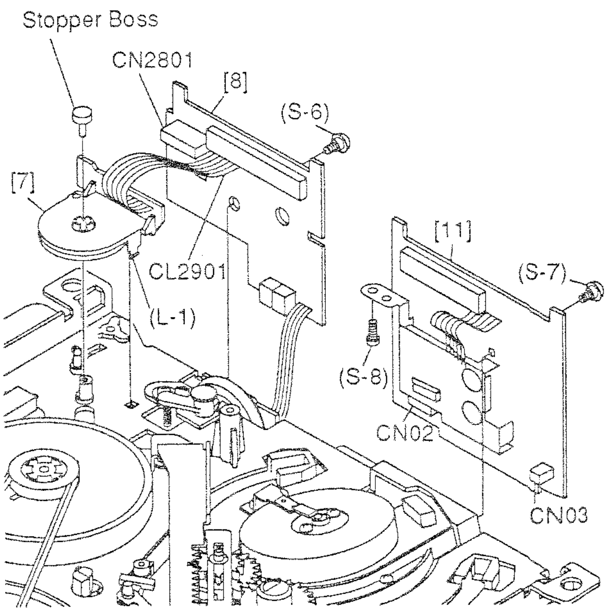

Stopper Boss
CN2801
[8]
(S-6)
[7]
[11]
CL2901
(S-7)
(L-1)
(S-8)
CN02
CN03

Fig. DM8

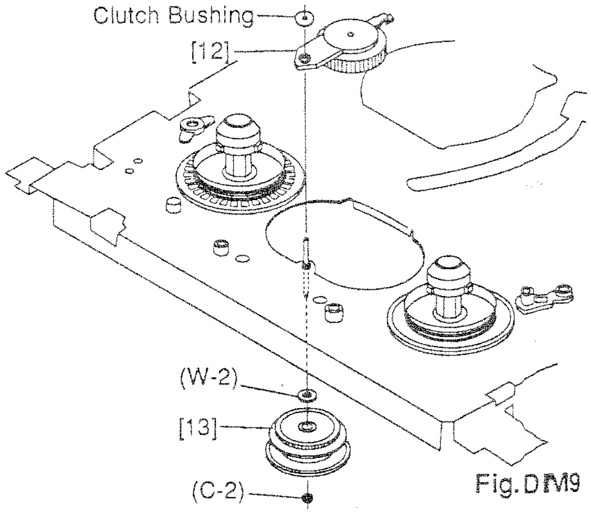

Clutch Bushing
[12]
(W-2)
[13]
(C-2)

Fig. DM9

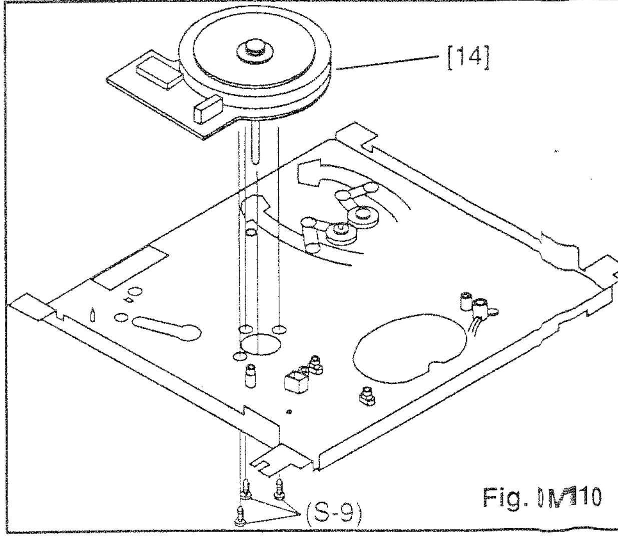


Fig. DM10

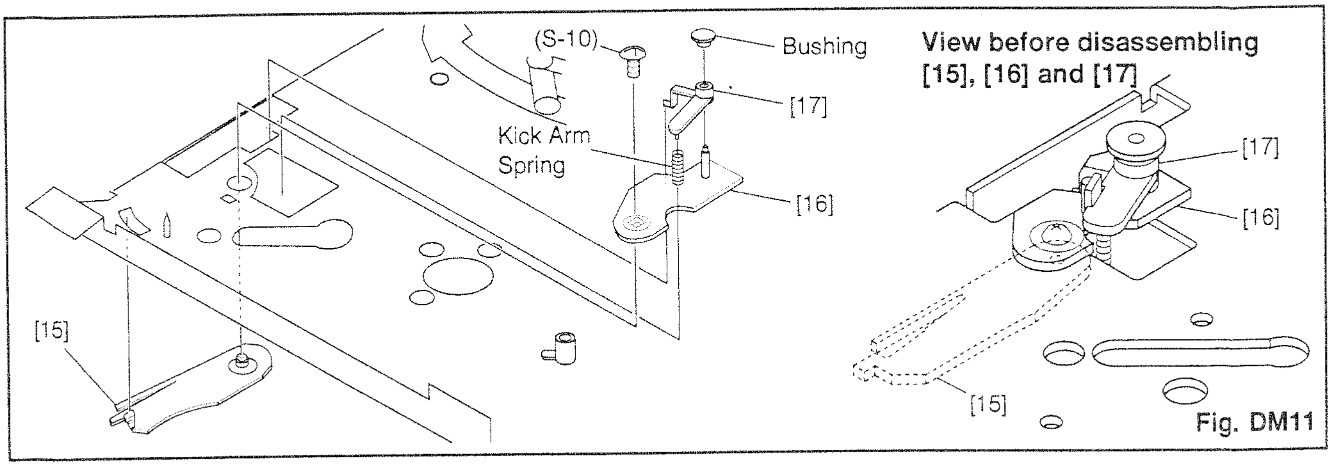

(S-10)
Bushing
View before disassembling [15], [16] and [17]
[17]
Kick Arm Spring
[16]
[15]
[17]
[16]
[15]

Fig. DM11

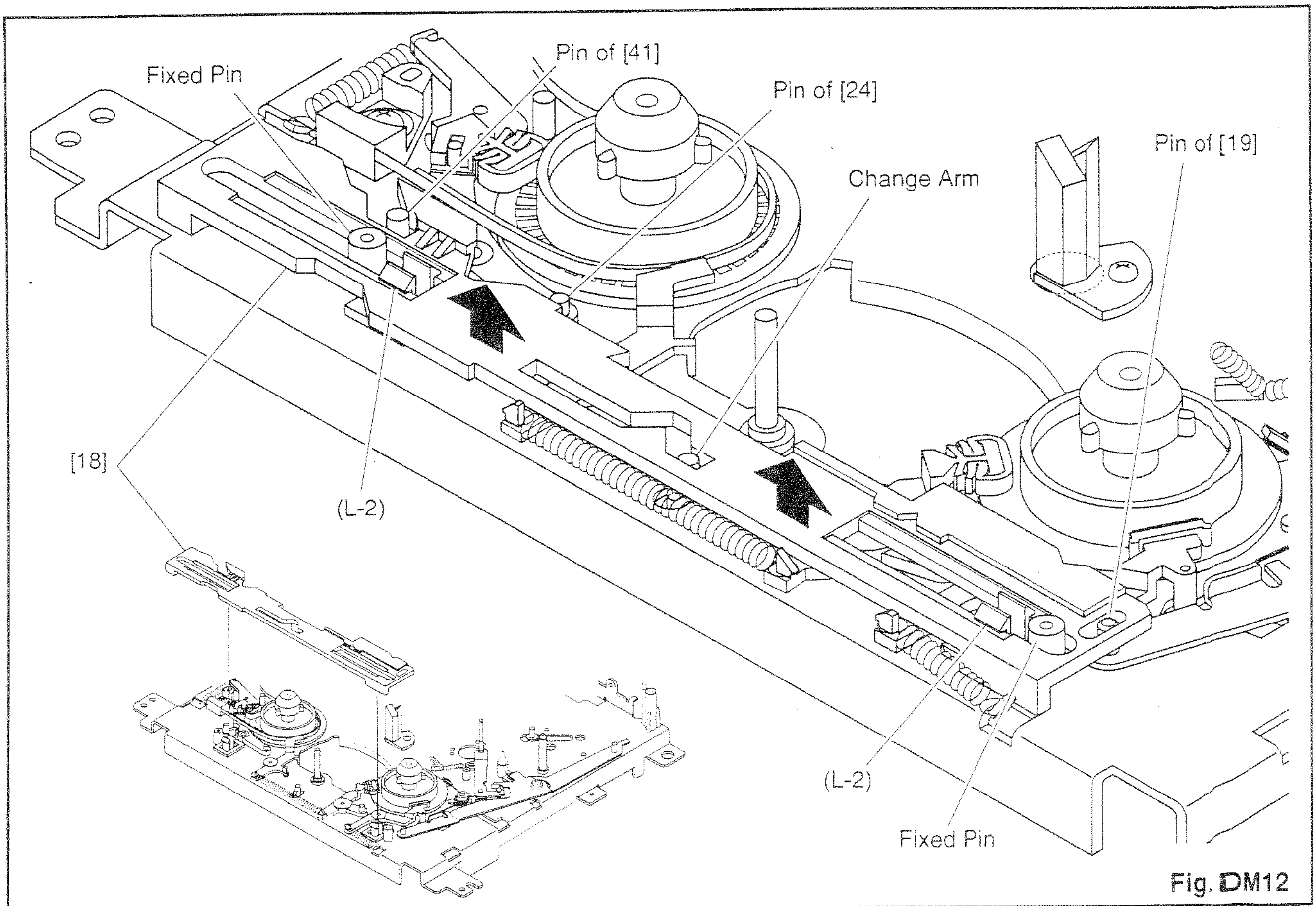
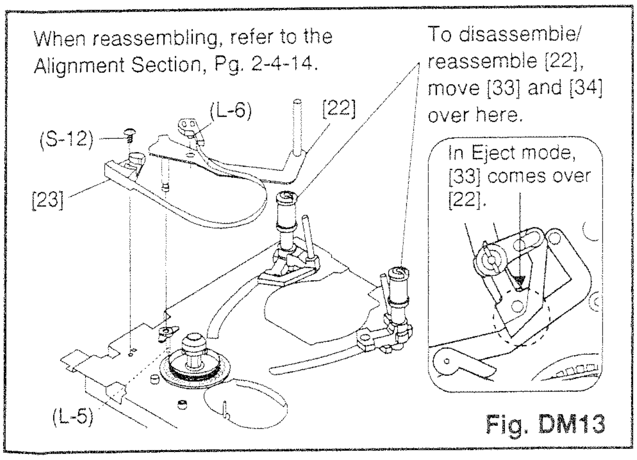

Fixed Pin
Pin of [41]
Pin of [24]
Change Arm
Pin of [19]
[18]
(L-2)
(L-2)
Fixed Pin

Fig. DM12


When reassembling, refer to the Alignment Section, Pg. 2-4-14.

To disassemble/ reassemble [22], move [33] and [34] over here.

In Eject mode, [33] comes over [22].

(L-6)
[22]
(S-12)
[23]
(L-5)

Fig. DM13

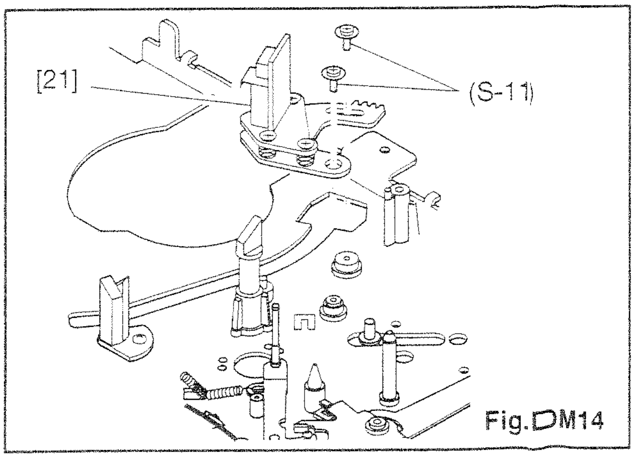
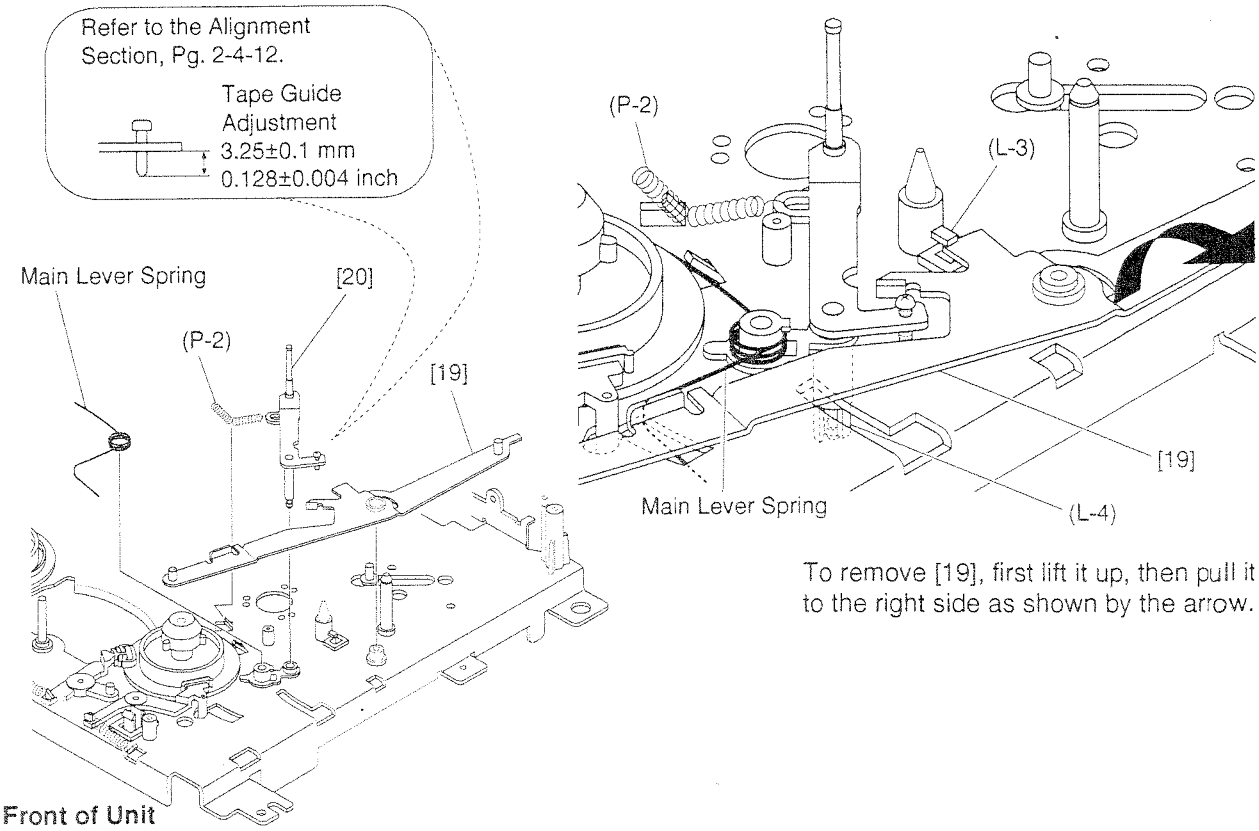


Fig. DM14


Refer to the Alignment Section, Pg. 2-4-12.
Tape Guide Adjustment
3.25±0.1 mm
0.128±0.004 inch
Main Lever Spring
[20]
(P-2)
[19]
Front of Unit
(P-2)
(L-3)
[19]
Main Lever Spring
(L-4)

To remove [19], first lift it up, then pull it to the right side as shown by the arrow.

Fig. DM15

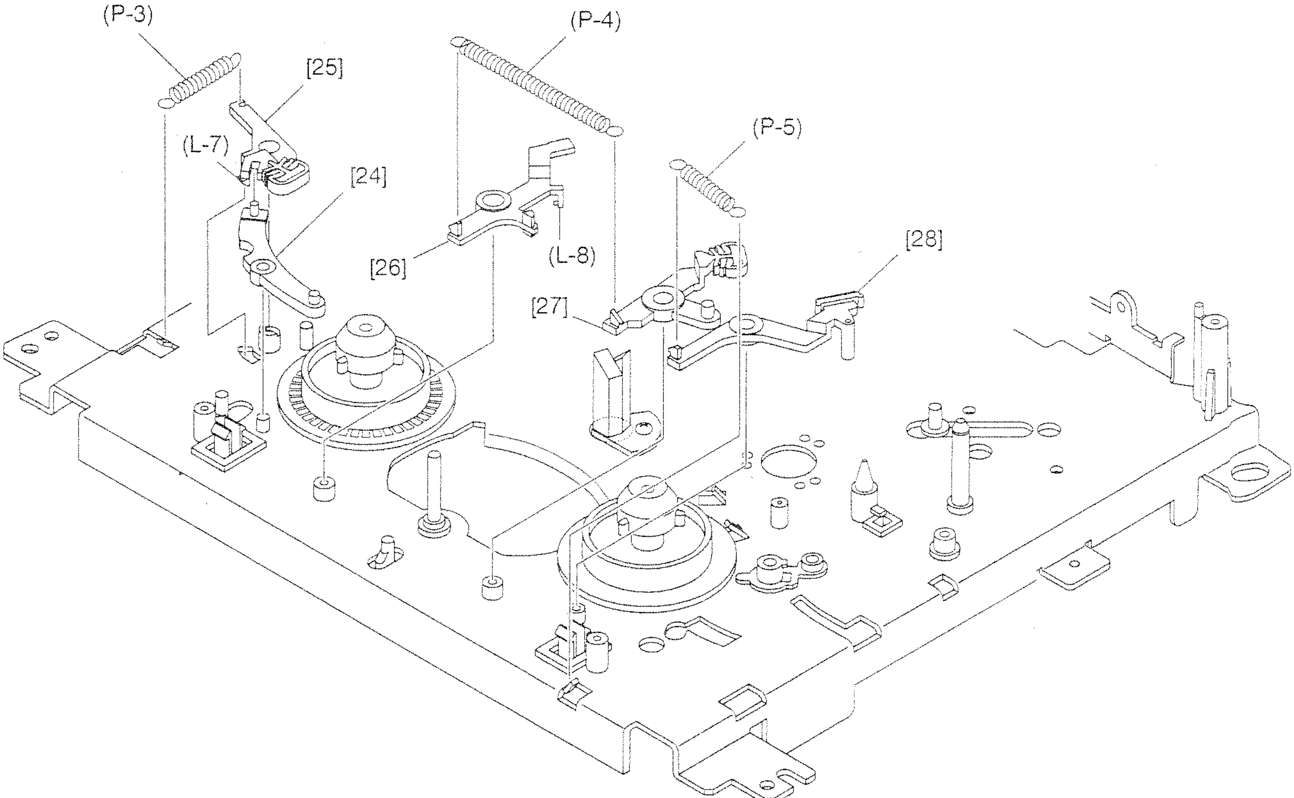
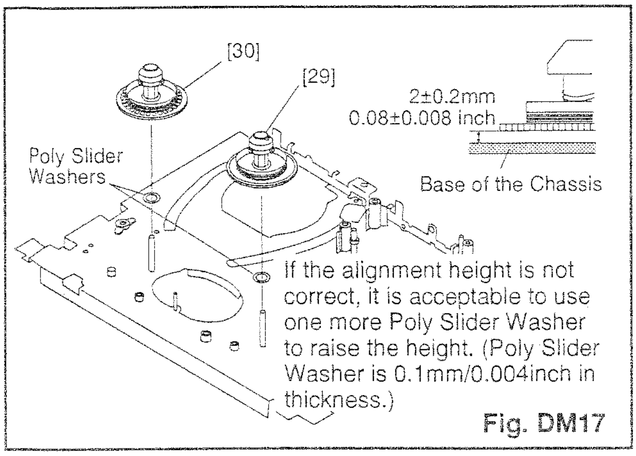
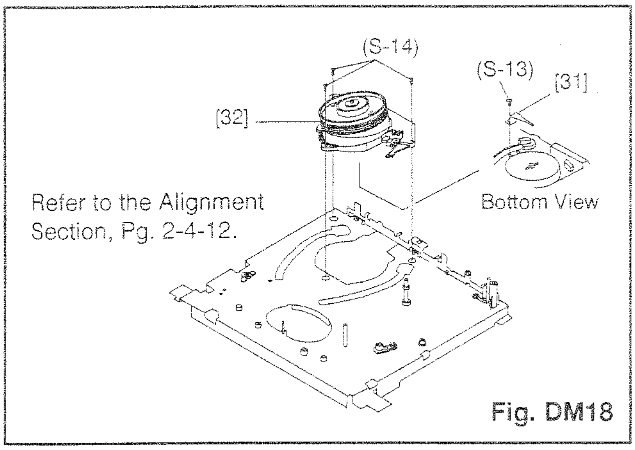

(P-3)
[25]
(L-7)
[24]
(P-4)
[26]
(L-8)
[27]
(P-5)
[28]

Fig. DM16


[30]
[29]
2±0.2mm
0.08±0.008 inch
Poly Slider Washers
Base of the Chassis

If the alignment height is not correct, it is acceptable to use one more Poly Slider Washer to raise the height. (Poly Slider Washer is 0.1mm/0.004inch in thickness.)

Fig. DM17


(S-14)
(S-13)
[31]
[32]
Bottom View

Refer to the Alignment Section, Pg. 2-4-12.

Fig. DM18

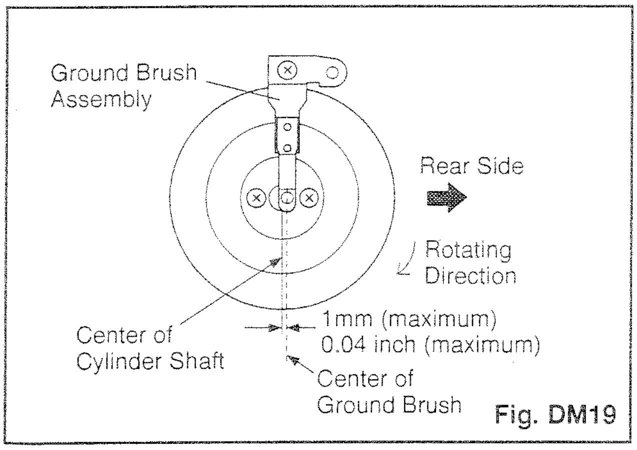

Ground Brush Assembly
Rear Side
Rotating Direction
Center of Cylinder Shaft
1mm (maximum)
0.04 inch (maximum)
Center of Ground Brush

Fig. DM19

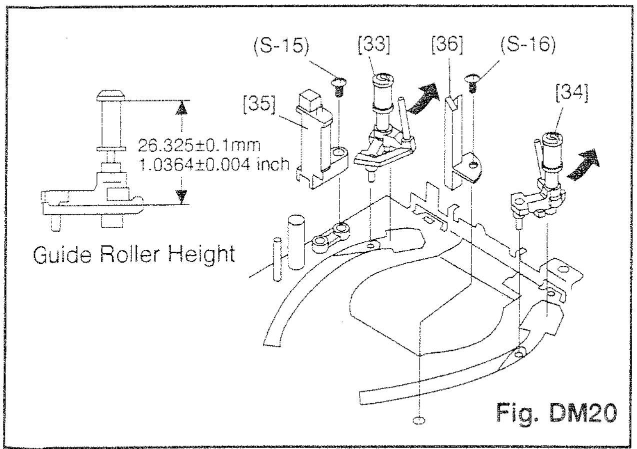
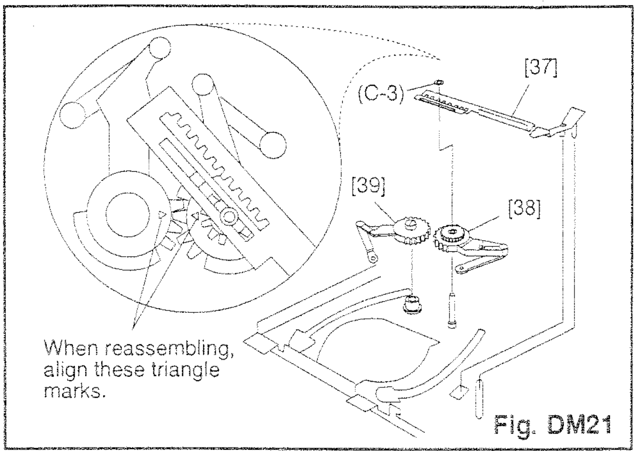

(S-15)
[33]
[36]
(S-16)
[35]
[34]
26.325±0.1mm
1.0364±0.004 inch
Guide Roller Height

Fig. DM20



When reassembling, align these triangle marks.

Fig. DM21

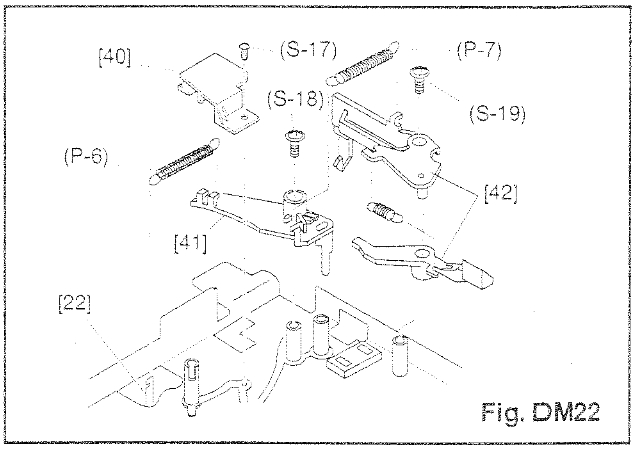

[40]
(S-17)
(P-7)
(S-18)
(S-19)
(P-6)
[42]
[41]
[22]

Fig. DM22

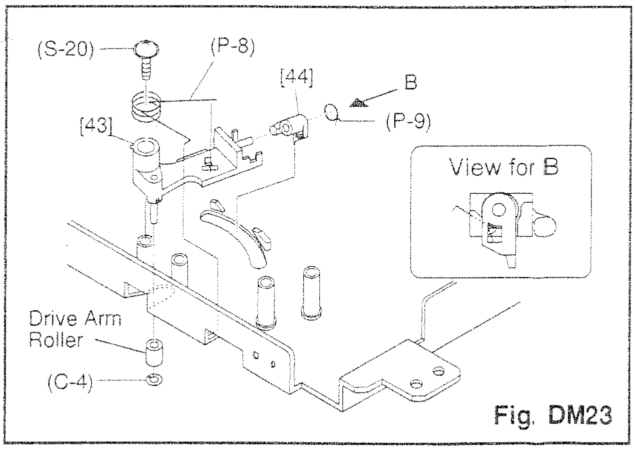

(S-20)
(P-8)
[44]
B
[43]
(P-9)
View for B
Drive Arm Roller
(C-4)

Fig. DM23

Front Loading Assembly

Before following the procedures described below, be sure to remove Front Loading Assembly from the main mechanism of the deck assembly. (See Fig. DM1.) When reassembling, start with the unit in Cassette-in mode and follow the steps in reverse order.

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[1]	[1]	Door Opener	R	DM24 DM27	*(L-1) Door Opener Spring	(+)
*[2]	[2]	Slider Gear	R (or L)	DM28 DM30	(C-1)	(+)
*[3]	[2]	Slider Gear	L (or R)	DM28 DM30	(C-2)	(+)
		Slider Shaft	T			Install in Eject position.
[4]	[2]	Cassette Drive Gear	R	DM25 DM26 DM28	(S-1), (S-2), Cassette Drive Gear Spring	(+)
[5]	[2]	FL Rack	R	DM25 DM28		
[6]	[2]	F Door Opener R	R	DM25 DM28 DM29	*(L-2) F Door Opener R Spring	DM29
[7]	[2]	Front Guide Cassette Holder Assembly Deck Angle B Deck Angle F	T	DM25 DM28	4(S-3), *2(L-3)	
		Cassette Guide R	R			(+)
		Cassette Guide L	L			(+)
[8]	[8]	Gear Supporter	L	DM28	(S-4)	
[9]	[9]	Mirror Holder R	R	DM28		
[10]	[10]	Mirror Holder L	L	DM28		
①	②	③	④	⑤	⑥	⑦

①: Follow steps in sequence. When reassembling, follow the steps in reverse order.
These numbers are also used as identification (location) No. of parts in the figures.

②: Indicates the part to start disassembling with in order to disassemble the part in column 1.

③: Name of the part

④: Location of the part: T=Top B=Bottom R=Right L=Left

⑤: Figure Number

⑥: Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, W=Washer, C=Cut Washer, S=Screw,
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(L-2) = two Locking Tabs (L-2)

⑦: Adjustment Information for Installation
(+): Refer to Deck Exploded Views for lubrication information.

*[2], *[3]: Slider Gear in Step [2] and that in Step [3] are identical. However, they are divided into two steps because, before reassembling Slider Shaft, one Slider Gear must be preinstalled at either end of Slider Shaft.

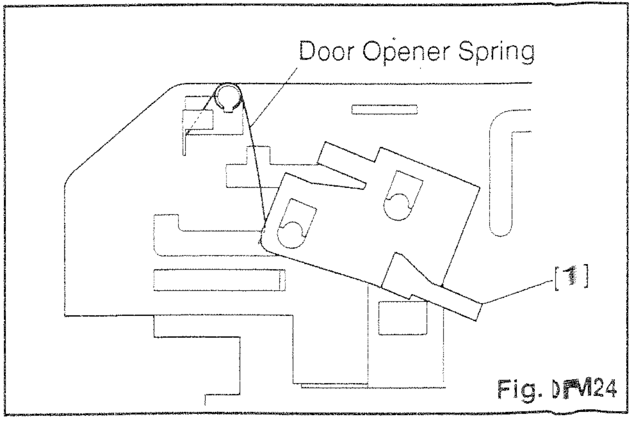
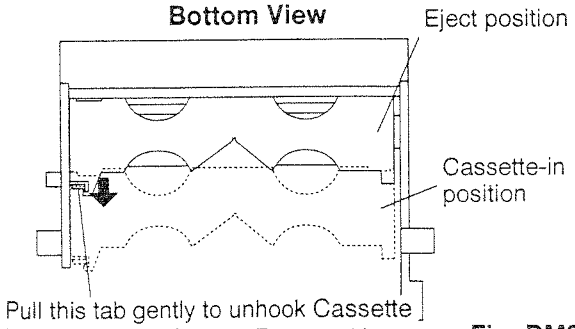


Fig. DM24

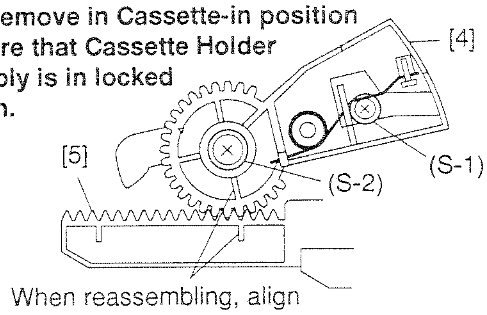
Before removing Parts [4] to [7], shift Cassette Holder Assembly to Cassette-in position.


Bottom View
Eject position
Cassette-in position

Pull this tab gently to unhook Cassette Holder Assembly from Eject position.

Fig. DM25

Install/remove in Cassette-in position to ensure that Cassette Holder Assembly is in locked position.



When reassembling, align these ribs as shown.

Fig. DM26

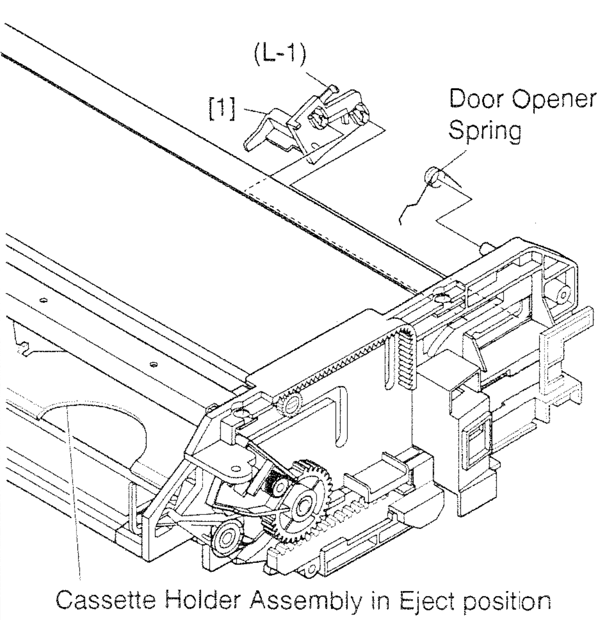

(L-1)
[1]
Door Opener Spring
Cassette Holder Assembly in Eject position

Fig. DM27

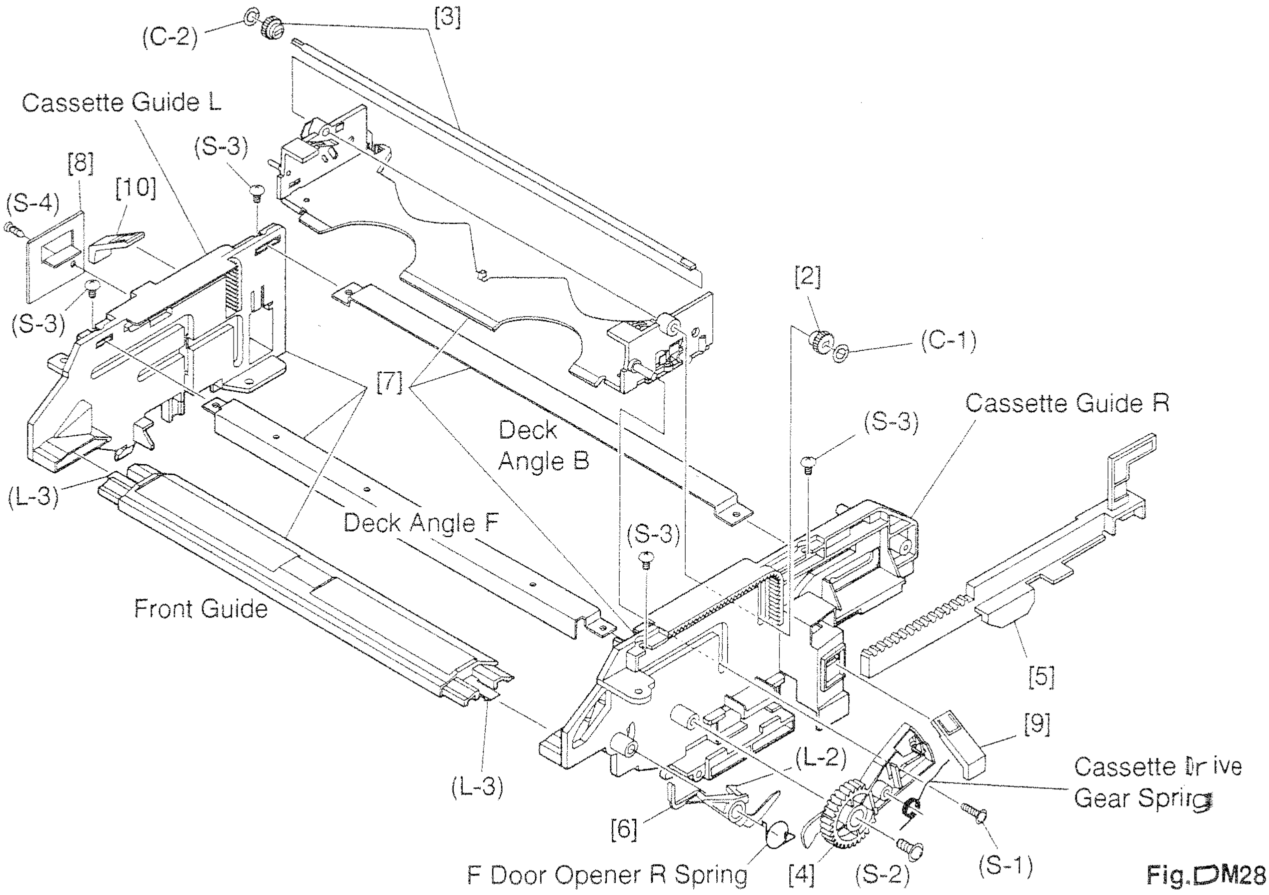

(C-2)
[3]
Cassette Guide L
[8]
(S-3)
[10]
(S-4)
(S-3)
[2]
(C-1)
[7]
(S-3)
Cassette Guide R
Deck Angle B
(L-3)
Deck Angle F
(S-3)
Front Guide
[5]
[9]
(L-2)
Cassette Drive Gear Spring
(L-3)
[6]
F Door Opener R Spring
[4]
(S-2)
(S-1)

Fig. DM28

View before disassembling [6]
(F Door Opener R Spring Installation)

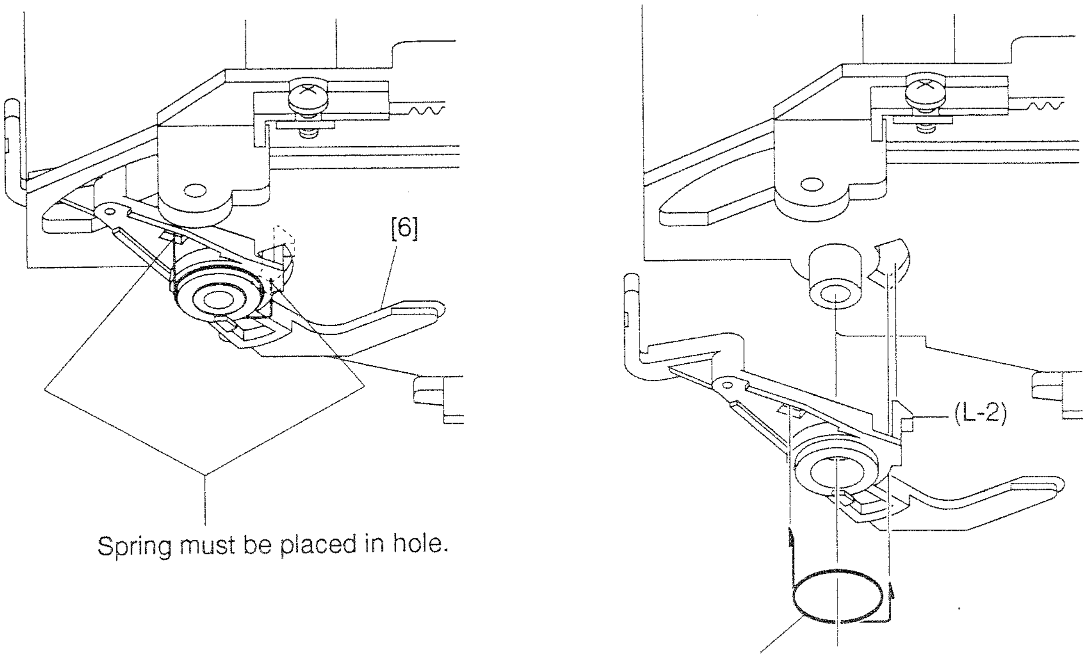
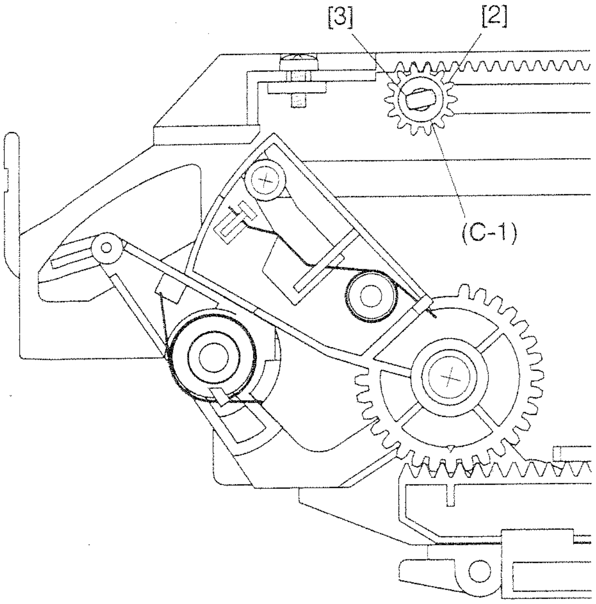

[6]
Spring must be placed in hole.
(L-2)
F Door Opener R Spring

Fig. DM29

View before disassembling [2] and [3]
(Installation of Slider Shaft and Slider Gear)



Install [2] and [3] in Eject position.
(When disassembling, [2] and [3] can be removed either in Eject position or Cassette-in position.)

- This figure shows where [2], [3] and other parts are in Eject position.

Fig. DM30

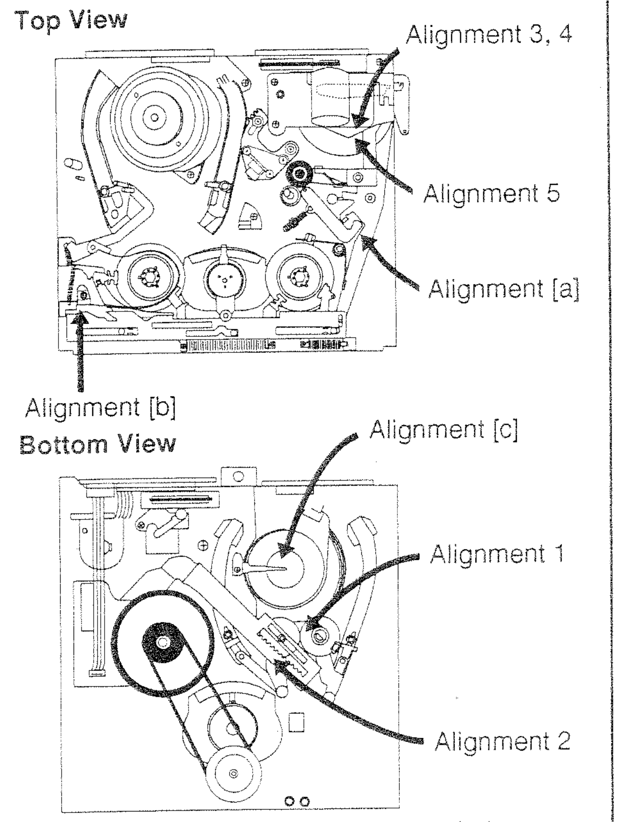
ALIGNMENT PROCEDURES OF MECHANISM

The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Switch, it is essential that the correct relationship between individual gears and levers be maintained.
All alignments are to be performed with the mechanism in Eject mode, in the sequence given. Each procedure assumes that all previous procedures have been completed.

IMPORTANT:

If any one of these alignments is not performed properly, even if off by only one tooth, the unit will unload or stop and it may result in damage to the mechanical or electrical parts.

Alignment points in Eject Position



Top View
Alignment 3, 4
Alignment 5
Alignment [a]
Alignment [b]
Bottom View
Alignment [c]
Alignment 1
Alignment 2

Alignment [a] through [c] can be done independently of any other alignment. **Fig. AL1**

Alignment [a]

Tape Guide Assembly

1. Measurement of the black screw must be as specified in Fig. AL3.

Alignment 1

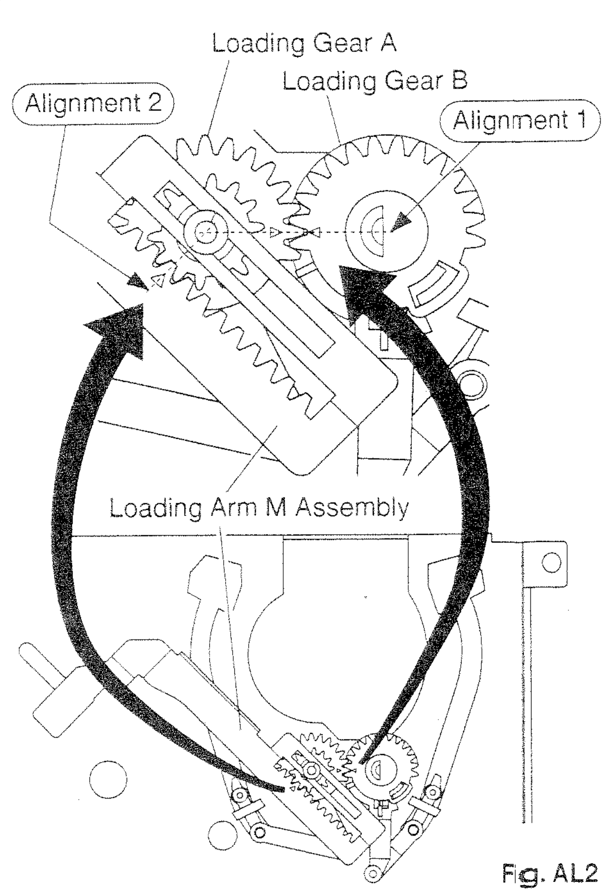
Loading Gears, A and B

1. Install Loading Gears A and B so that their triangle marks point to each other as shown in Fig. AL2.

Alignment 2

Loading Arm M Assembly

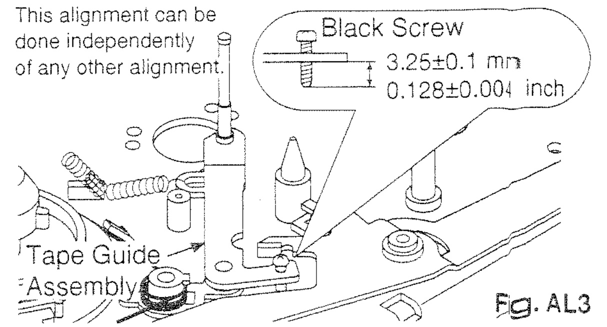
1. Keeping Alignment 1 correct with the two triangles pointing to each other, install Loading Arm M Assembly so that its tooth with yet another triangle mark is in the position to align with Loading Gear A and the center of the shaft. See Fig. AL2.



Loading Gear A
Loading Gear B
Alignment 2
Alignment 1
Loading Arm M Assembly

Fig. AL2

This alignment can be done independently of any other alignment.



Black Screw
3.25±0.1 mm
0.128±0.004 inch
Tape Guide Assembly

Fig. AL3

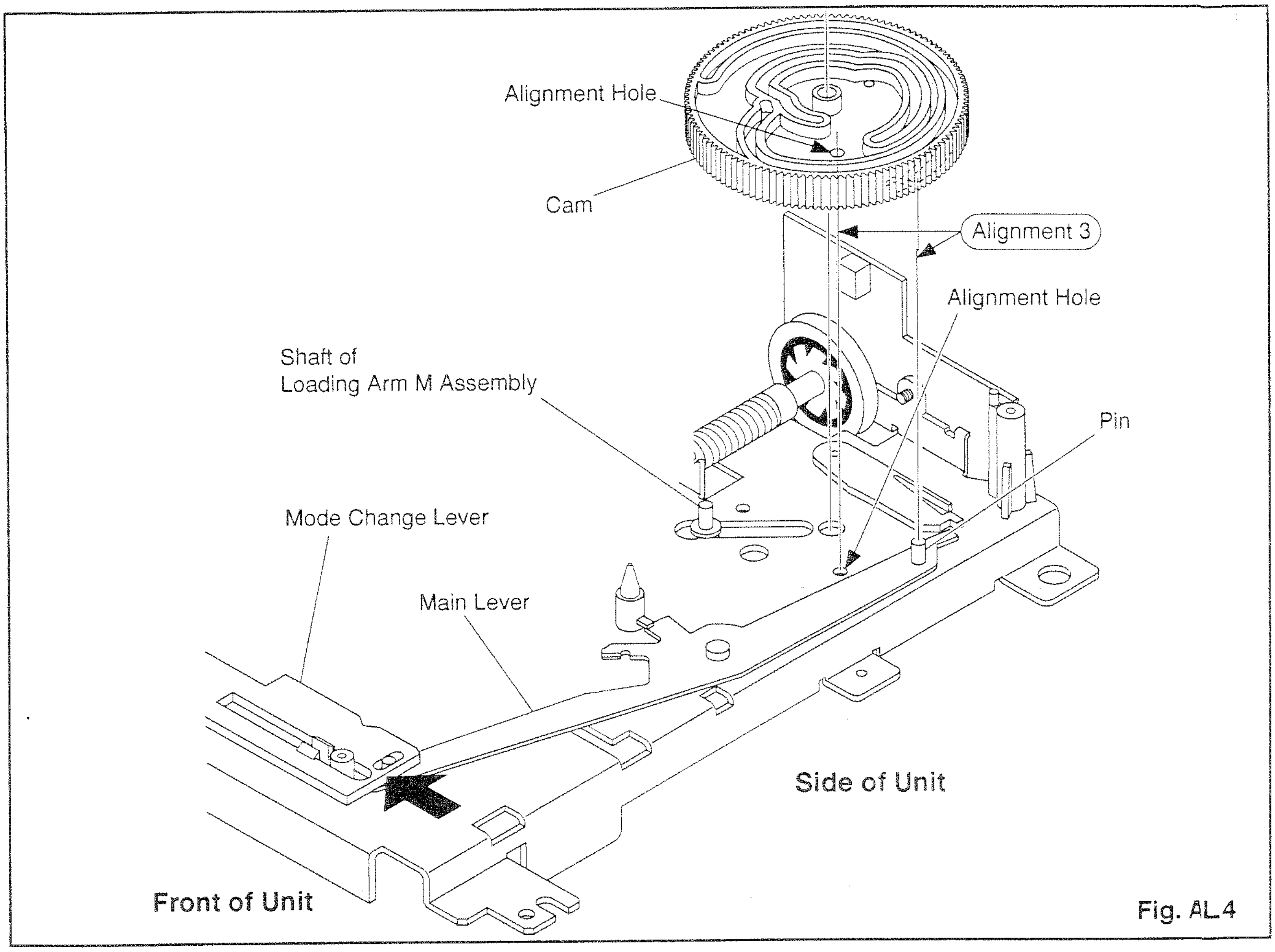

Alignment Hole
Cam
Alignment 3
Alignment Hole
Shaft of Loading Arm M Assembly
Pin
Mode Change Lever
Main Lever
Side of Unit
Front of Unit

Fig. AL4

Alignment 3

Cam

1. Make sure that the mechanism is in Eject mode so that the shaft of Loading Arm M Assembly is in the position shown in Fig. AL4.
2. Align the alignment hole of Cam with the alignment hole of the base, holding Cam just above the base.
3. Carefully keeping these two holes aligned, install Cam while pushing Mode Change Lever in the direction of the arrow. Mode Change Lever must be pushed to make the pin on Main Lever fit in the proper groove in lower Cam.
4. After installing Cam, make sure that the alignment hole of Cam is still aligned with the base hole and that the pin on Main Lever is inserted into the proper groove of lower Cam as specified in Fig. AL4.

Alignment 4

Pinch Roller Arm Assembly

1. Ensure that the pin of Pinch Roller Arm Assembly is positioned in the end of the groove of upper Cam as shown in Fig. AL5.

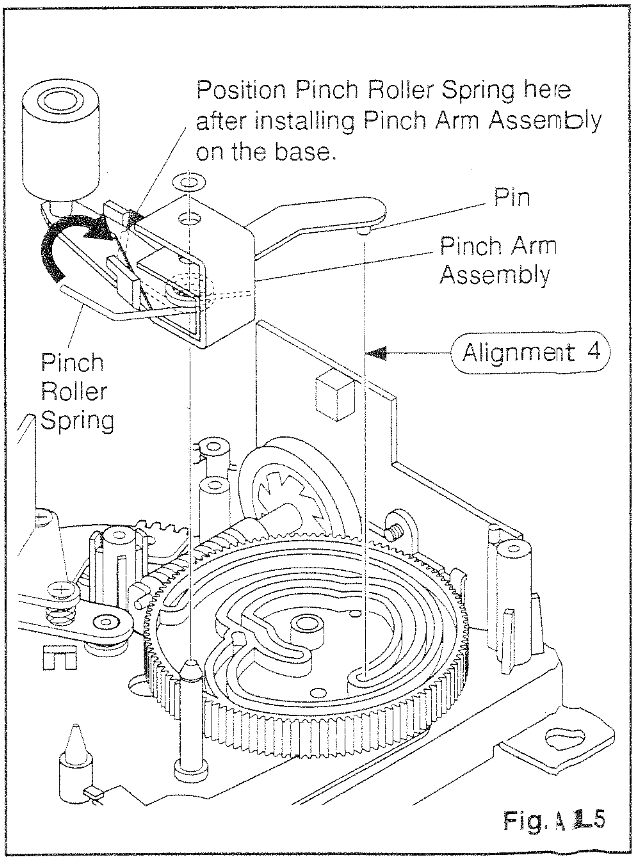

Position Pinch Roller Spring here after installing Pinch Arm Assembly on the base.
Pin
Pinch Arm Assembly
Alignment 4
Pinch Roller Spring

Fig. AL5

Alignment 5

Cassette Drive Lever Assembly

1. Ensure that the pin of Cassette Drive Lever Assembly is positioned in the groove of upper Cam as shown in Fig. AL6.

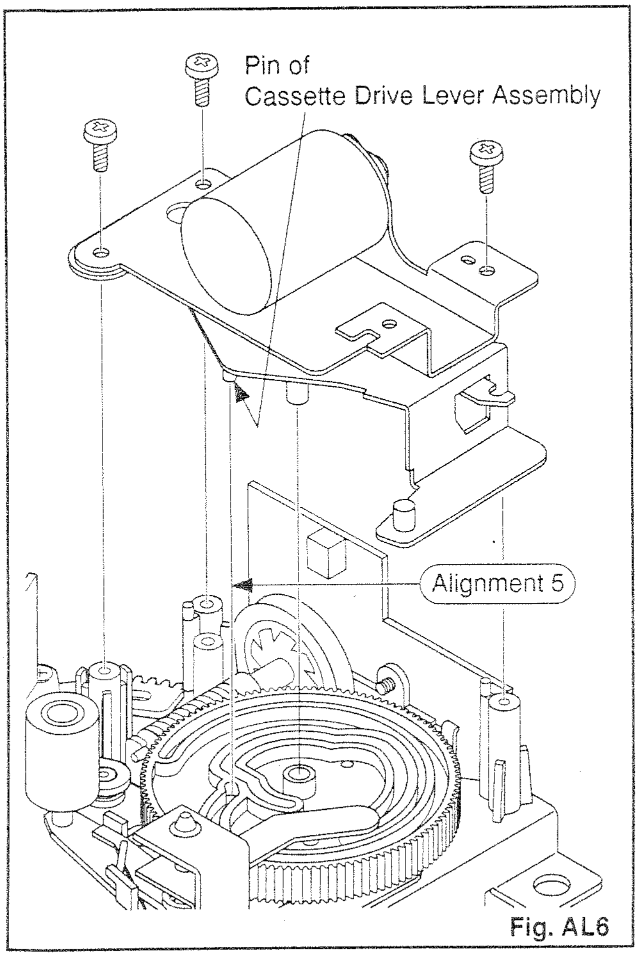

Pin of
Cassette Drive Lever Assembly
Alignment 5

Fig. AL6

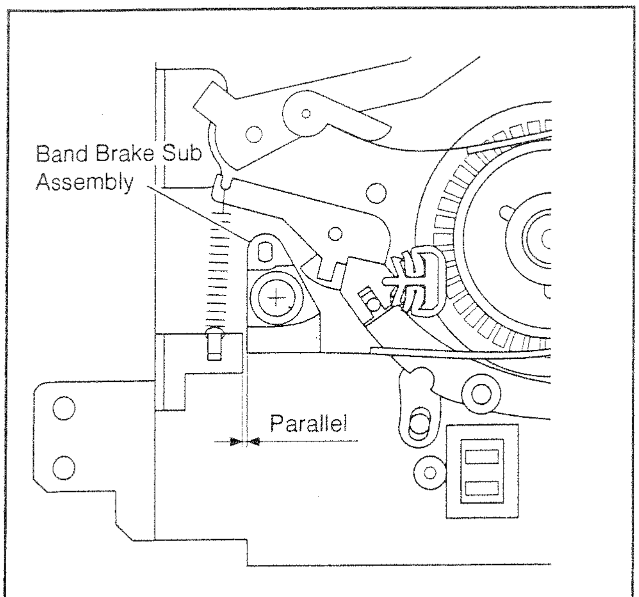

Band Brake Sub
Assembly
Parallel

Fig. AL7

Alignment [b]

This alignment can be performed independently of any other alignment.

Band Brake Sub Assembly

1. Ensure that Band Brake Sub Assembly is positioned parallel to the chassis' notch as shown in Fig. AL7. Make this measurement with the eye.

Alignment [c]

This alignment can be performed independently of any other alignment.

Ground Brush Assembly

1. Check to see if Ground Brush Assembly is properly set in a position equal to or just less than 1mm (0.04 inch) (but never more than 1 mm or 0.04 inch), as measured from the center of the brush to the center of the Cylinder Shaft as shown in Fig. AL8.
2. If this measurement exceeds 1mm (0.04 inch), loosen and refasten the screw of Ground Brush Assembly. If this is not enough and further adjustment is necessary, loosen and refasten the three screws of Cylinder Assembly. These three screws are shown in Fig. DM18 in DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM.

Note: DO NOT install Ground Brush Assembly in the opposite position (on the left side of the center of the Cylinder shaft), but always within a maximun of 1mm (0.04 inch) to the right side of the center of ths shaft.

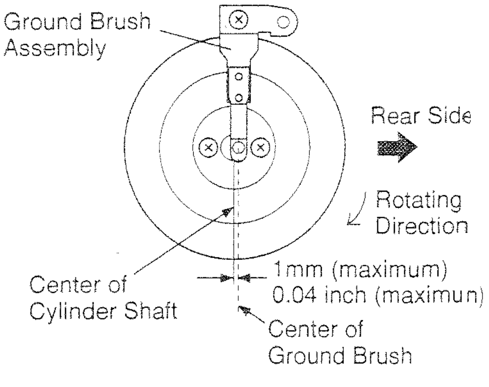

Ground Brush
Assembly
Rear Side
Rotating
Direction
Center of
Cylinder Shaft
1mm (maximum)
0.04 inch (maximun)
Center of
Ground Brush

Fig. AL8

SCHEMATIC DIAGRAMS AND CBA'S

Standard Notes

WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark " ⚠ " in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Capacitor Temperature Markings

Mark	Capacity change rate	Standard temperature	Temperature range
(B)	±10%	20°C	-25~+85°C
(F)	+30 -80%	20°C	-25~+85°C
(SR)	±15%	20°C	-25~+85°C
(Z)	+30 -80%	20°C	-10~+70°C

Note:

1 Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.

2 All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).

3 Resistor wattages are 1/5W or 1/6W unless otherwise specified.

4 All capacitance values are indicated in μF ($P=10^{-6}\mu F$).

5 All voltages are DC voltages unless otherwise specified.

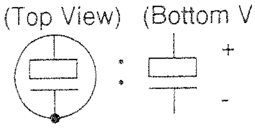
6 Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

TUNER BLOCK SYMBOL NO. 70**

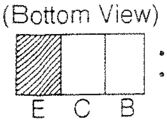
Example: "C08" in this "TUNER BLOCK" is C7008.

Capacitors and transistors are represented by the following symbols.

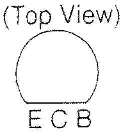
CBA Symbols



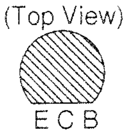
: Electrolytic Capacitor



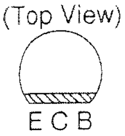
: Transistor or Digital Transistor



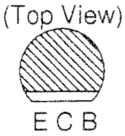
NPN Transistor



PNP Transistor



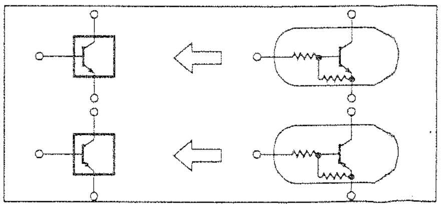
NPN Digital Transistor



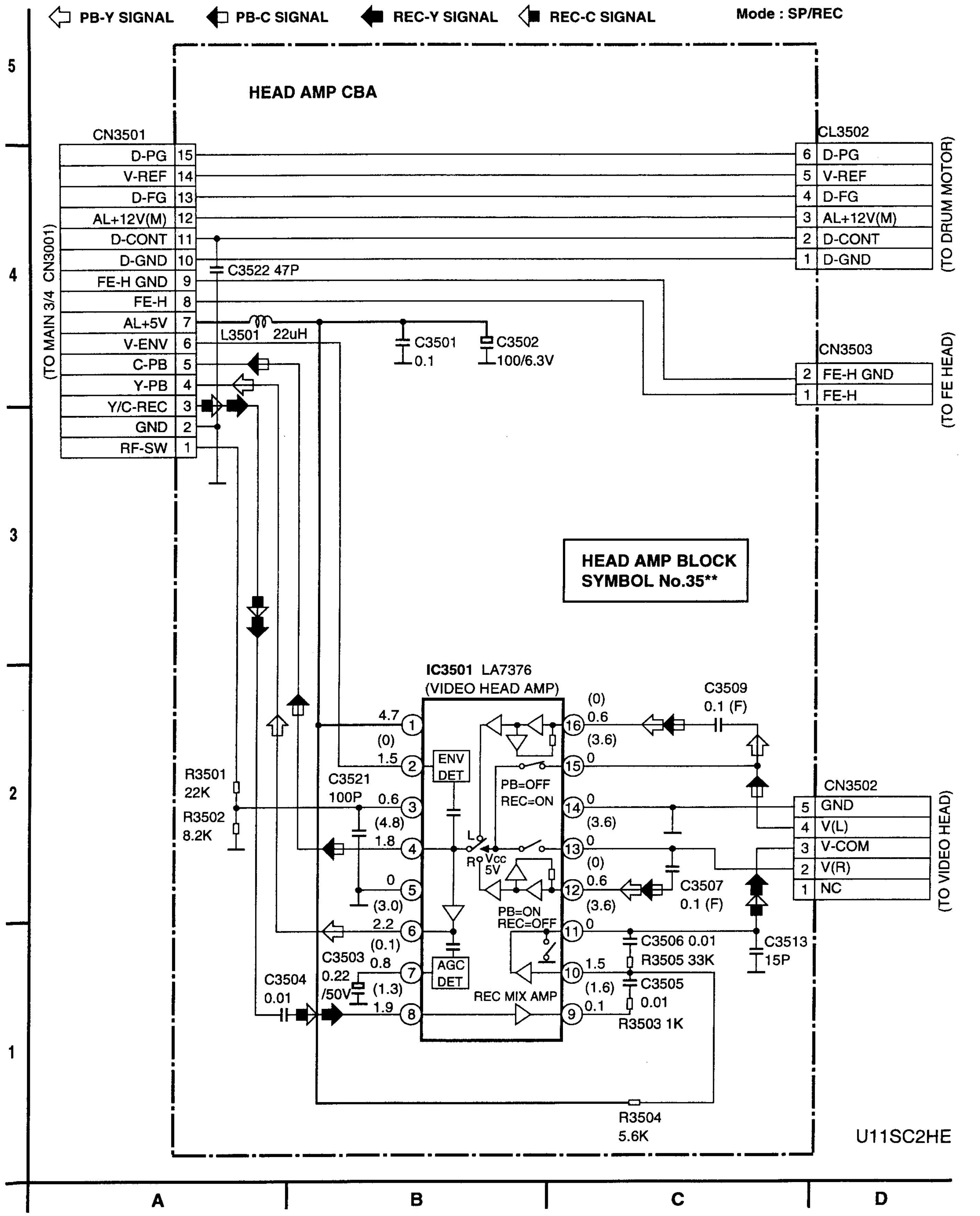
PNP Digital Transistor

Schematic Diagram Symbos

Digital Transistor

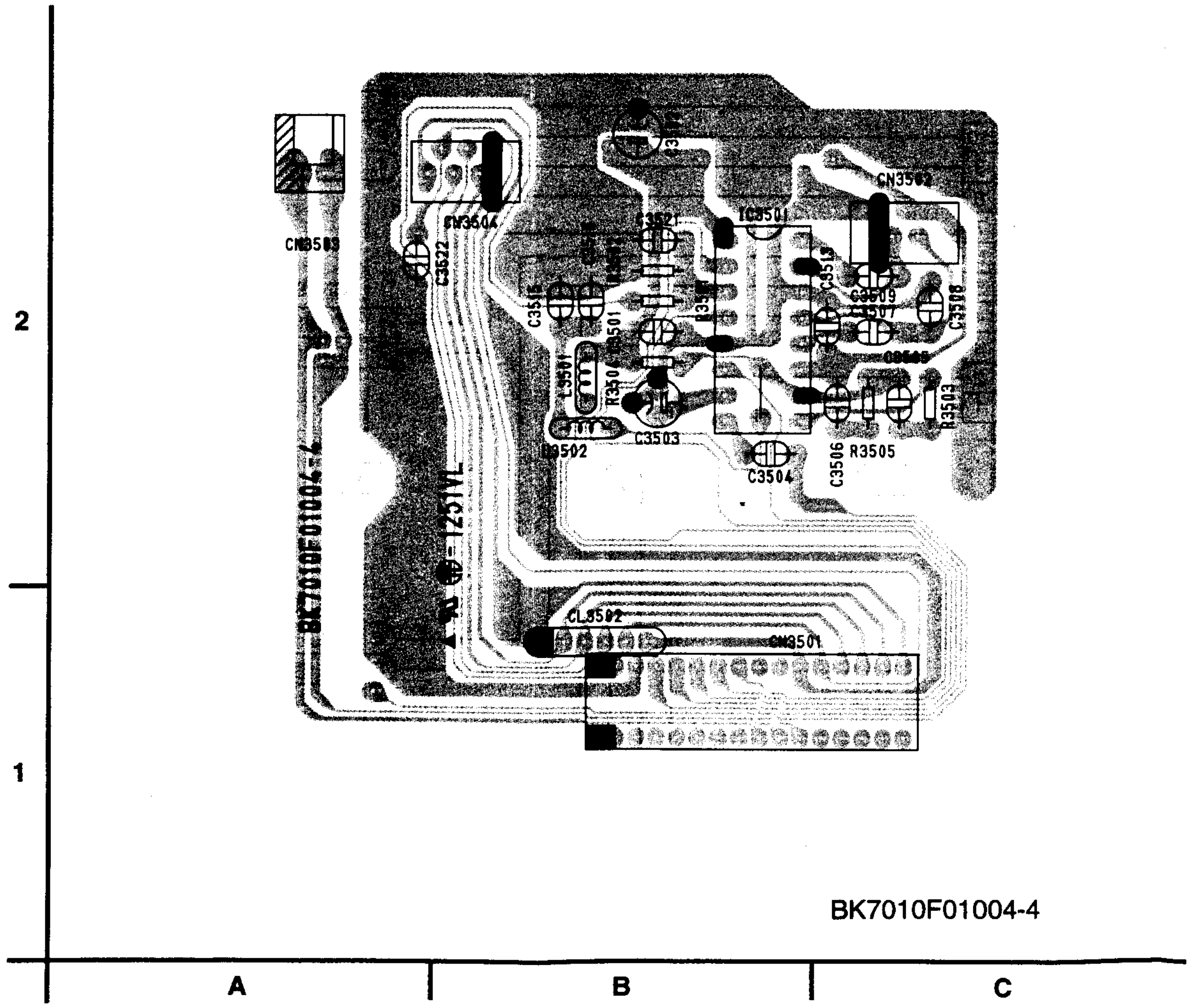


Head Amp



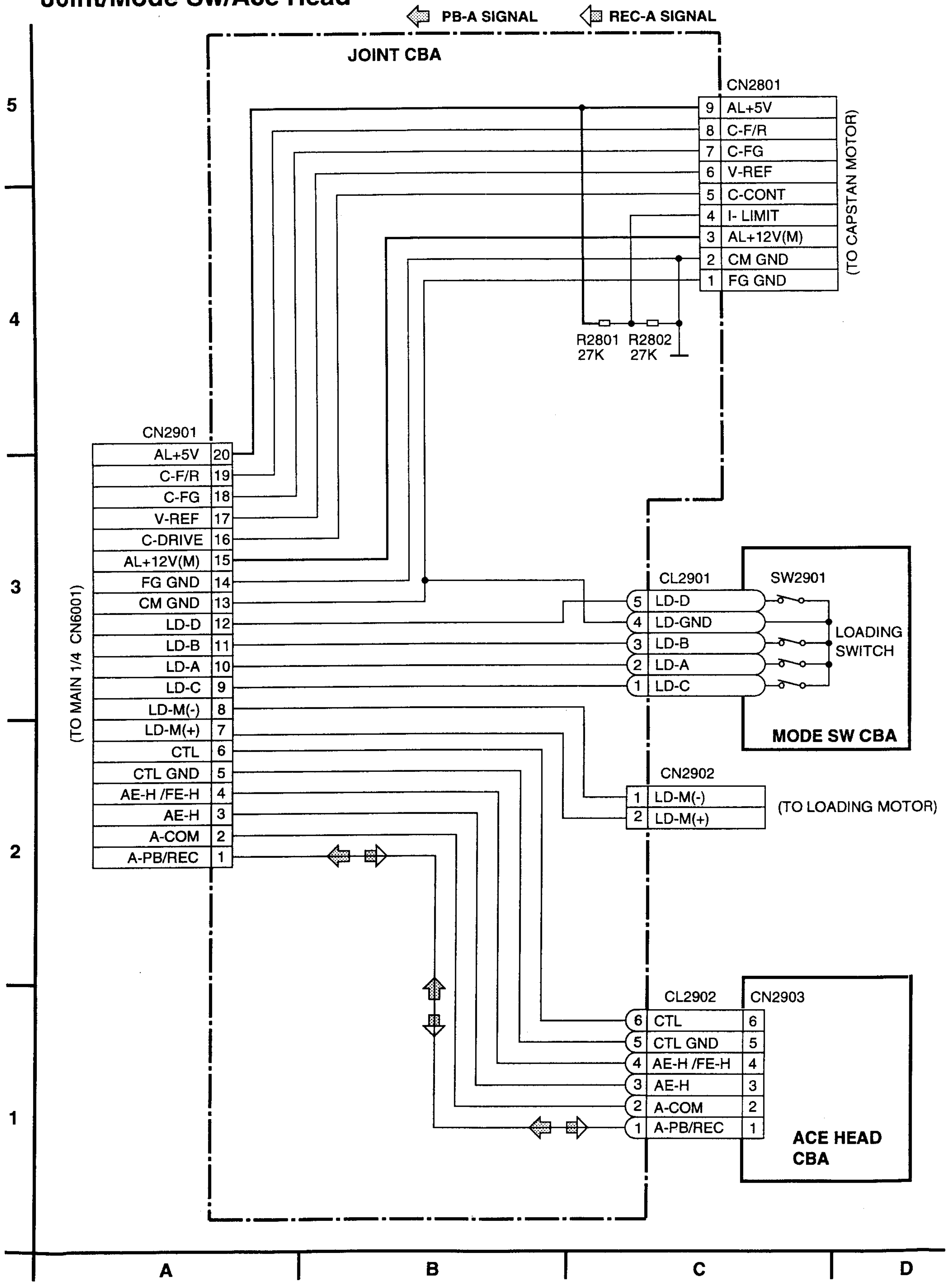
PB-Y SIGNAL
PB-C SIGNAL
REC-Y SIGNAL
REC-C SIGNAL
Mode : SP/REC
HEAD AMP CBA
CN3501
D-PG 15
V-REF 14
D-FG 13
AL+12V(M) 12
D-CONT 11
D-GND 10
FE-H GND 9
FE-H 8
AL+5V 7
V-ENV 6
C-PB 5
Y-PB 4
Y/C-REC 3
GND 2
RF-SW 1
(TO MAIN 3/4 CN3001)
C3522 47P
L3501 22uH
C3501 0.1
C3502 100/6.3V
CL3502
6 D-PG
5 V-REF
4 D-FG
3 AL+12V(M)
2 D-CONT
1 D-GND
(TO DRUM MOTOR)
CN3503
2 FE-H GND
1 FE-H
(TO FE HEAD)
HEAD AMP BLOCK
SYMBOL No.35**
IC3501 LA7376
(VIDEO HEAD AMP)
ENV DET
AGC DET
PB=OFF REC=ON
PB=ON REC=OFF
Vcc 5V
L
R
REC MIX AMP
4.7
(0)
1.5
0.6
(4.8)
1.8
0
(3.0)
2.2
(0.1)
0.8
(1.3)
1.9
(0)
0.6
(3.6)
0
0
(3.6)
0
(0)
0.6
(3.6)
0
1.5
(1.6)
0.1
C3509 0.1 (F)
C3507 0.1 (F)
C3506 0.01
R3505 33K
C3505 0.01
R3503 1K
C3513 15P
R3501 22K
R3502 8.2K
C3521 100P
C3503 0.22 /50V
C3504 0.01
R3504 5.6K
CN3502
5 GND
4 V(L)
3 V-COM
2 V(R)
1 NC
(TO VIDEO HEAD)
U11SC2HE
5
4
3
2
1
A
B
C
D

Head Amp CBA Top View

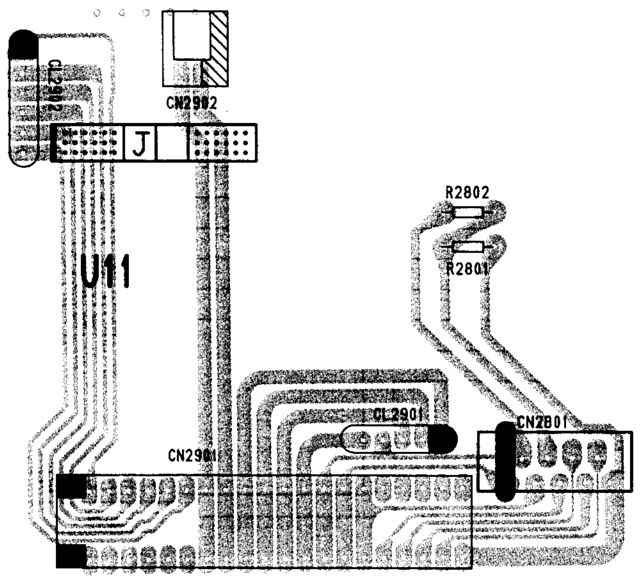


CN3503
CN3504
IC3501
C3522
L3501
R3502
R3504
C3503
C3504
C3506
R3505
C3509
C3507
C3508
R3503
CL3502
CN3501
BK7010F01004-4
BK7010F01004-4
2
1
A
B
C

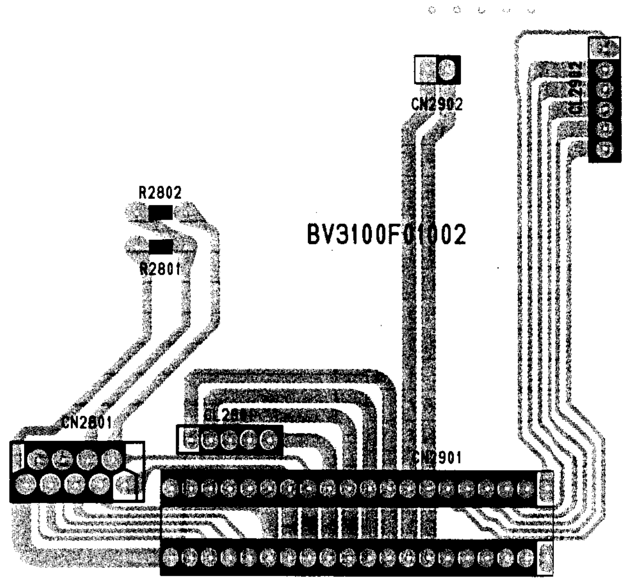
Joint/Mode Sw/Ace Head


PB-A SIGNAL
REC-A SIGNAL
JOINT CBA
CN2801
9 AL+5V
8 C-F/R
7 C-FG
6 V-REF
5 C-CONT
4 I- LIMIT
3 AL+12V(M)
2 CM GND
1 FG GND
(TO CAPSTAN MOTOR)
R2801 27K
R2802 27K
CN2901
AL+5V 20
C-F/R 19
C-FG 18
V-REF 17
C-DRIVE 16
AL+12V(M) 15
FG GND 14
CM GND 13
LD-D 12
LD-B 11
LD-A 10
LD-C 9
LD-M(-) 8
LD-M(+) 7
CTL 6
CTL GND 5
AE-H /FE-H 4
AE-H 3
A-COM 2
A-PB/REC 1
(TO MAIN 1/4 CN6001)
CL2901
5 LD-D
4 LD-GND
3 LD-B
2 LD-A
1 LD-C
SW2901
LOADING SWITCH
MODE SW CBA
CN2902
1 LD-M(-)
2 LD-M(+)
(TO LOADING MOTOR)
CL2902
6 CTL
5 CTL GND
4 AE-H /FE-H
3 AE-H
2 A-COM
1 A-PB/REC
CN2903
6
5
4
3
2
1
ACE HEAD CBA
5
4
3
2
1
A
B
C
D

Joint CBA Top View

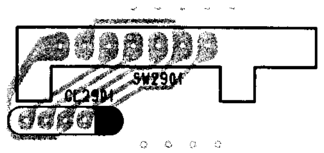

CN2902
J
U11
R2802
R2801
CL2901
CN2801
CN2901

Joint CBA Bottom View

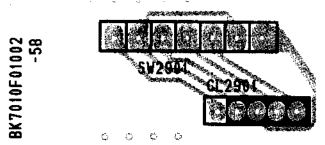

CN2902
R2802
R2801
BV3100F01002
CN2801
CN2901

BV3100F01002

Mode SW CBA Top View

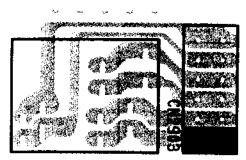

SW2901
CL2901

Mode SW CBA Bottom View

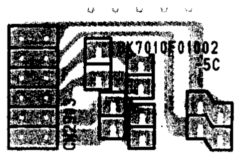

BK7010F01002 -5B
SW2901
CL2901

BK7010F01002-5B

ACE Head CBA Top View



ACE Head CBA Bottom View


BK7010F01002 -5C

BK7010F01002-5C

EXPLODED VIEWS AND PARTS LIST SECTION

VIDEO CASSETTE RECORDER

9A-1011 / 9A-1211

Sec. 3: Exploded views and Parts List Section

- ● Exploded views
- ● Parts List

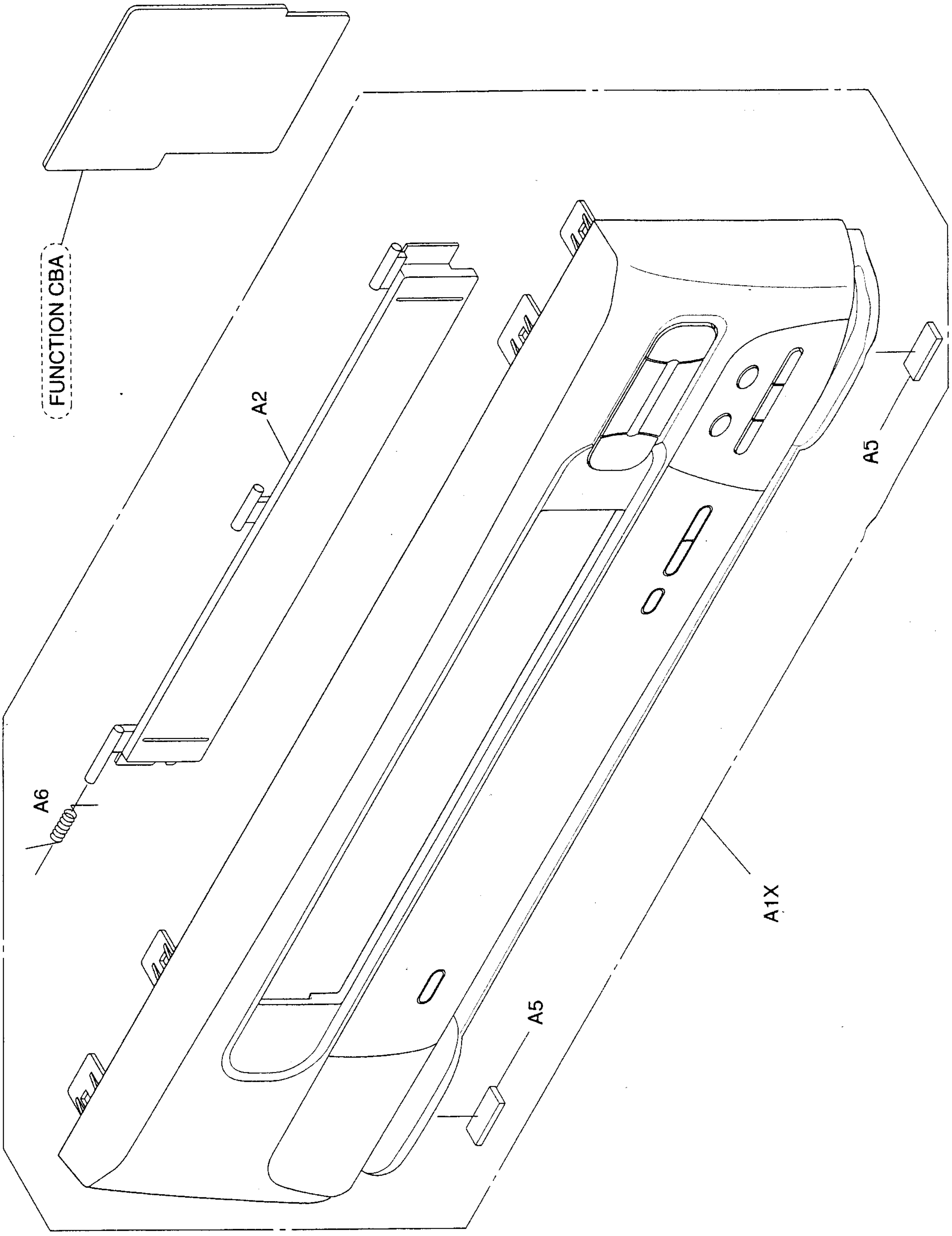
TABLE OF CONTENTS

Exploded Views 3-1-1
Mechanical Parts List 3-2-1
Electrical Parts List 3-3-1
Deck Mechanical Parts List 3-4-1
Deck Electrical Parts List 3-5-1

EXPLODED VIEWS

Front Panel

See Electrical Parts List for parts with this mark.


FUNCTION CBA
A2
A6
A5
A1X
A5

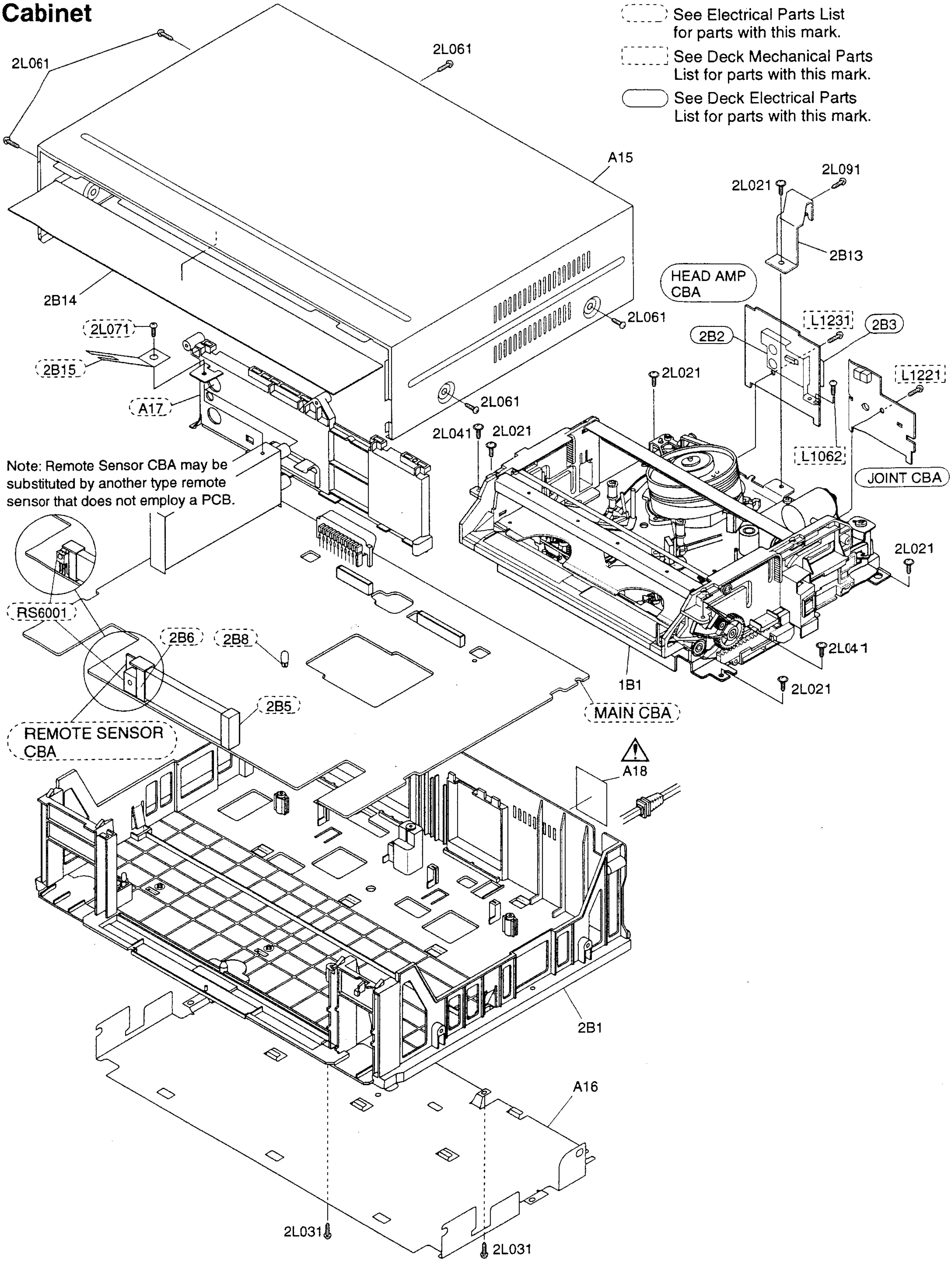
Cabinet

See Electrical Parts List for parts with this mark.

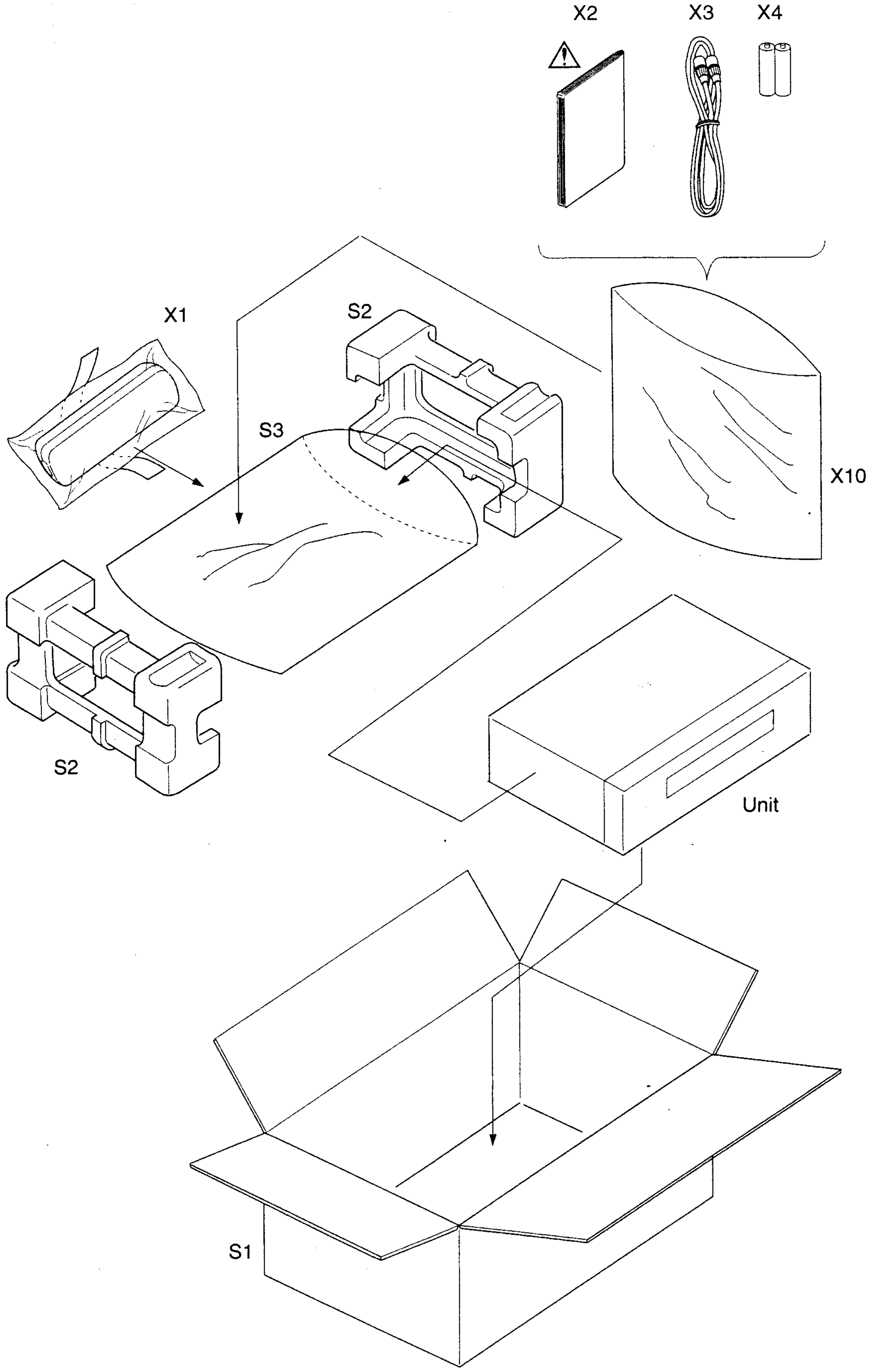
See Deck Mechanical Parts List for parts with this mark.

See Deck Electrical Parts List for parts with this mark.

Note: Remote Sensor CBA may be substituted by another type remote sensor that does not employ a PCB.


2L061
2L061
A15
2L021
2L091
2B13
HEAD AMP CBA
2B14
2L071
2B15
A17
2L061
2B2
L1231
2B3
2L021
L1221
2L061
2L041
2L021
L1062
JOINT CBA
2L021
RS6001
2B6
2B8
2L041
1B1
2L021
MAIN CBA
2B5
REMOTE SENSOR CBA
A18
2B1
A16
2L031
2L031

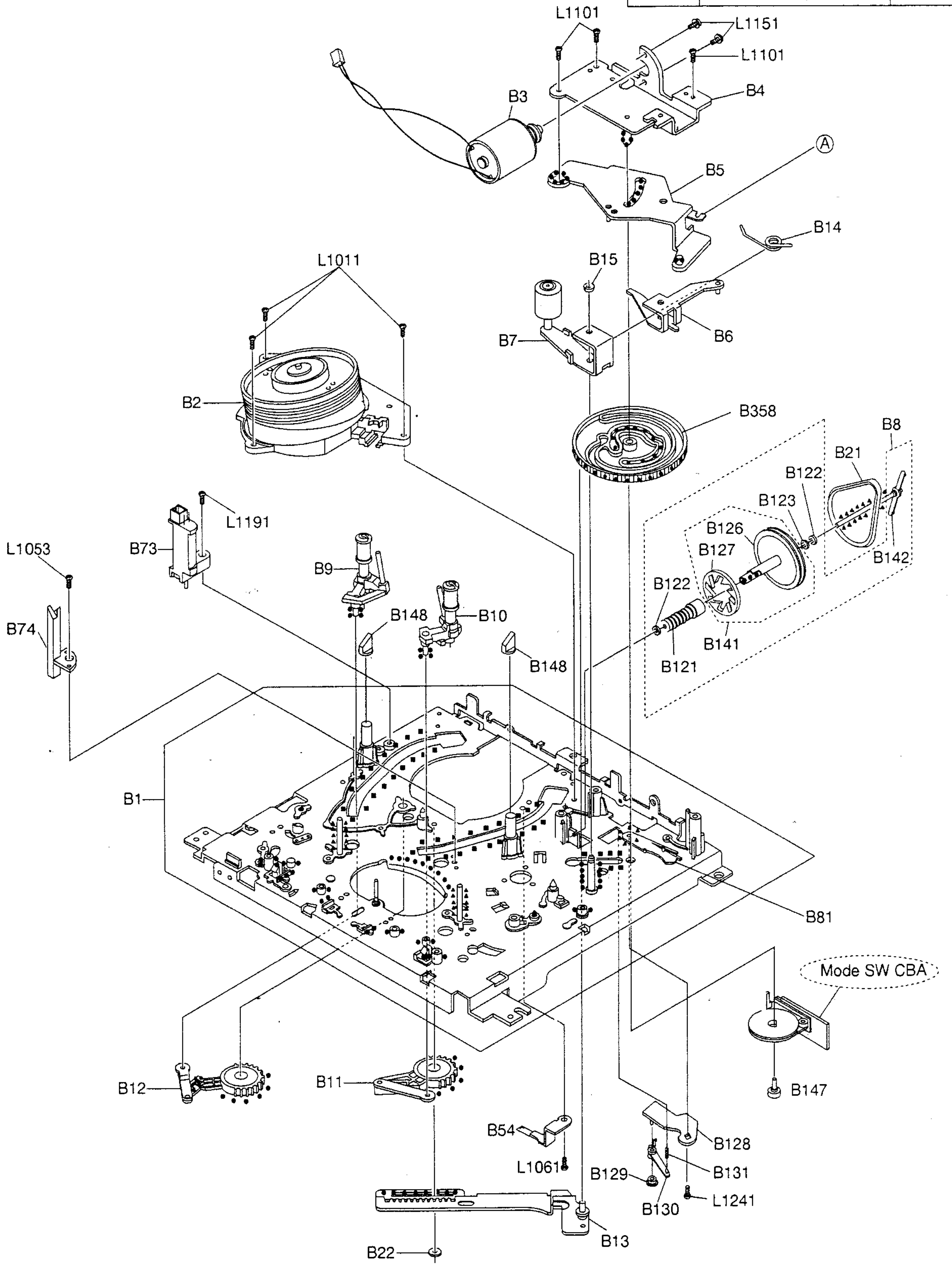
Packing


X2
X3
X4
X1
S2
S3
X10
S2
Unit
S1

DECK EXPLODED VIEWS

View 1

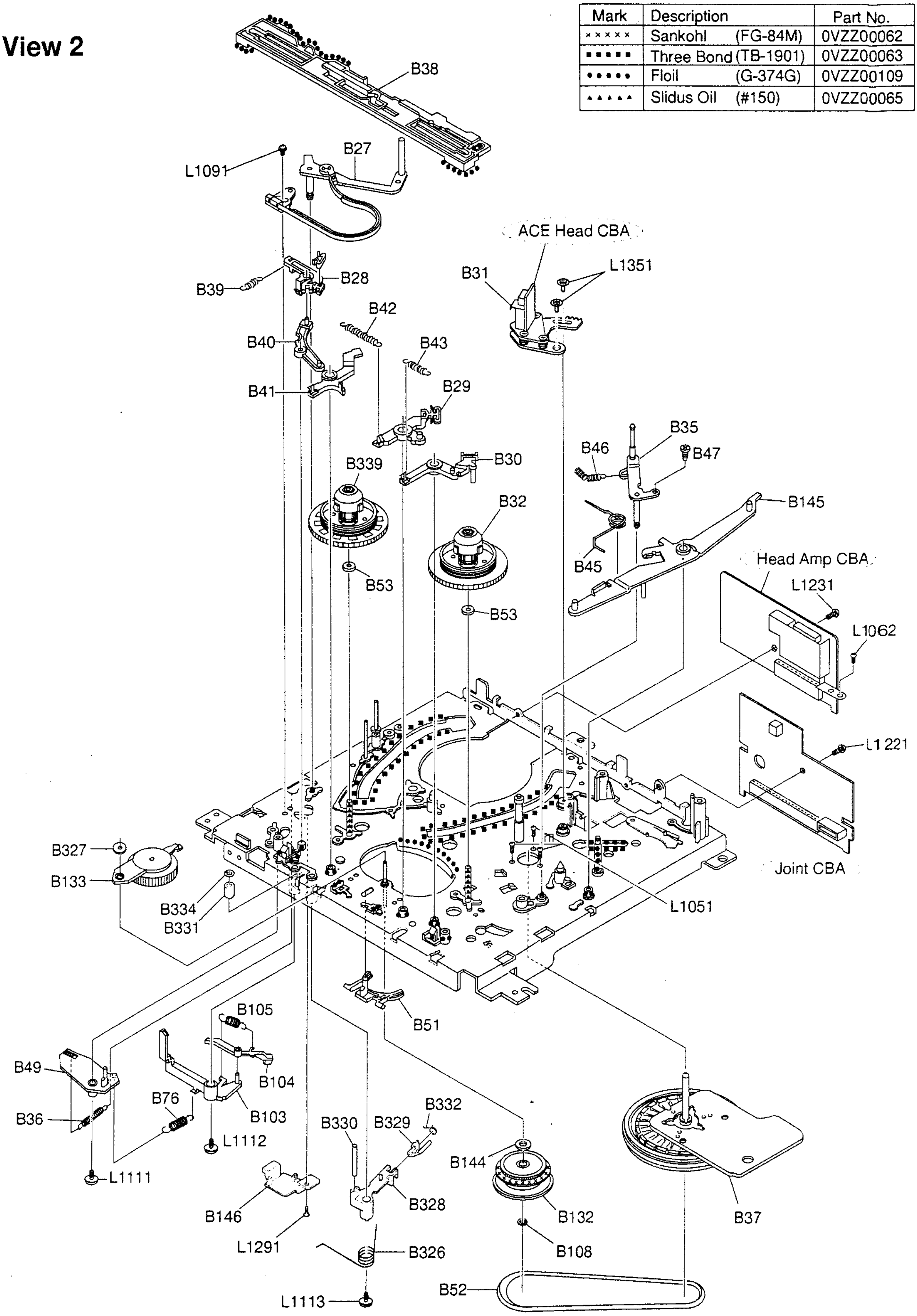
Mark	Description	Part No.
× × × × ×	Sankohl (FG-84M)	0VZZ00062
■ ■ ■ ■ ■	Three Bond (TB-1901)	0VZZ00063
● ● ● ● ●	Floil (G-374G)	0VZZ00109
▲ ▲ ▲ ▲ ▲	Slidus Oil (#150)	0VZZ00065


L1101
L1151
L1101
B4
B3
Ⓐ
B5
B14
L1011
B15
B6
B7
B2
B358
B8
B21
B122
B123
B126
B127
B142
B122
B141
B121
L1191
L1053
B73
B9
B148
B10
B148
B74
B1
B81
Mode SW CBA
B147
B12
B11
B54
L1061
B128
B131
B129
B130
L1241
B13
B22

⬭ See the Deck Electrical Parts List.

View 2

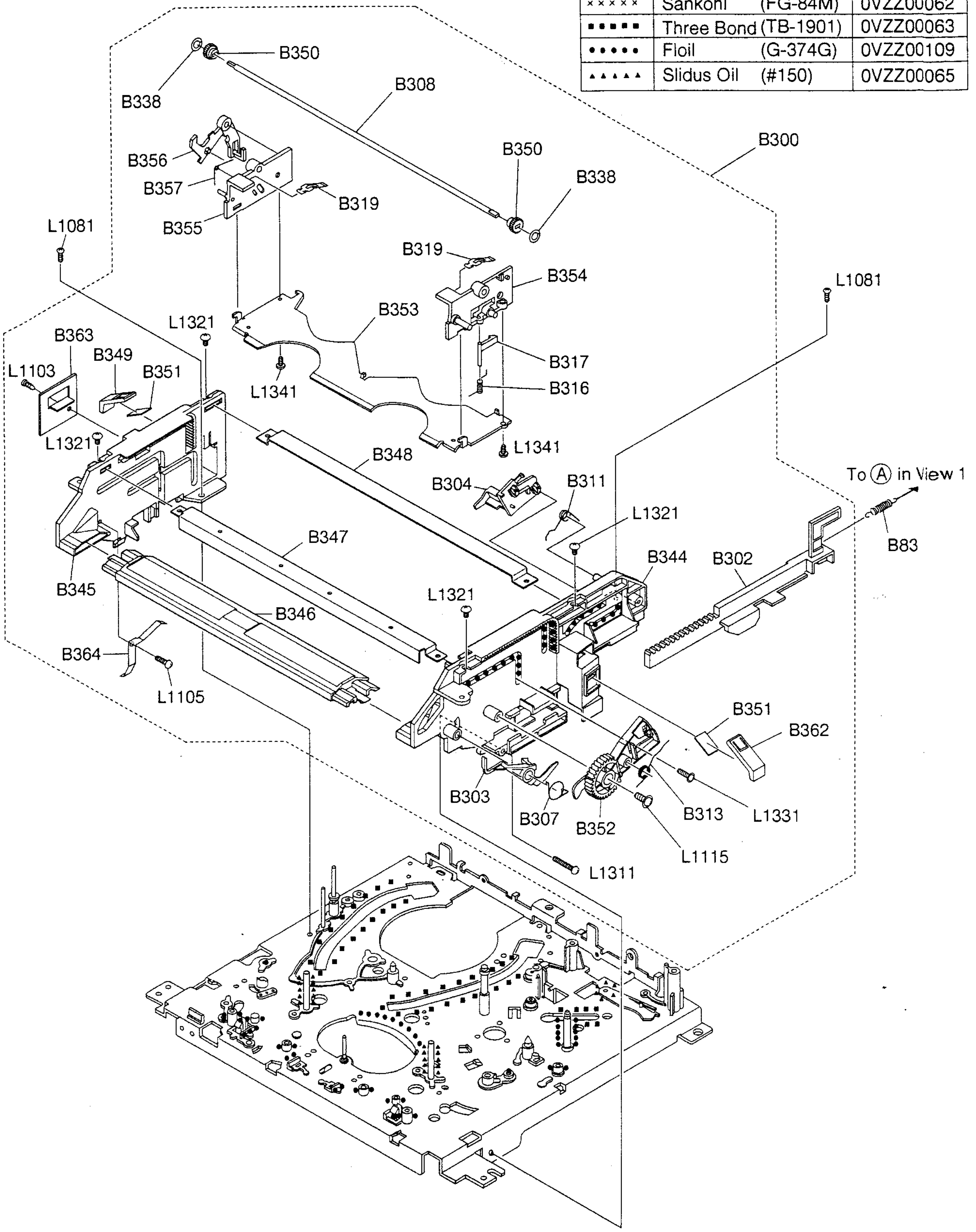
Mark	Description	Part No.
×××××	Sankohl (FG-84M)	0VZZ00062
■■■■■	Three Bond (TB-1901)	0VZZ00063
•••••	Floil (G-374G)	0VZZ00109
▲▲▲▲▲	Slidus Oil (#150)	0VZZ00065


B38
L1091
B27
ACE Head CBA
B31
L1351
B39
B28
B42
B40
B43
B41
B29
B35
B46
B47
B339
B30
B145
B32
B45
Head Amp CBA
B53
L1231
B53
L1062
L1221
B327
B133
Joint CBA
B334
B331
L1051
B51
B105
B49
B104
B76
B103
B36
B332
L1112
B330
B329
B144
L1111
B328
B146
B132
B37
L1291
B326
B108
B52
L1113

See the Deck Electrical Parts List.

View 3

Mark	Description		Part No.
×××××	Sankohl	(FG-84M)	0VZZ00062
■■■■■	Three Bond	(TB-1901)	0VZZ00063
•••••	Floil	(G-374G)	0VZZ00109
▲▲▲▲▲	Slidus Oil	(#150)	0VZZ00065


B350
B338
B308
B356
B357
B319
B355
B350
B338
B300
L1081
B319
B354
L1081
B353
L1321
B363
B349
L1103
B351
L1341
B317
B316
L1321
B348
L1341
B304
B311
To Ⓐ in View 1
L1321
B83
B347
B344
B302
B345
L1321
B346
B364
L1105
B351
B362
B303
B307
B352
B313
L1331
L1115
L1311

MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

Ref. No.	Description	Part No.
A1X	FRONT ASSEMBLY	0VM201787
A 2	DOOR, CASSETTE	0VM406812
A 3	BUTTON, MODE	0VM406809
A 5	FOOT	0VM403657
A 6	SPRING, DOOR	0VM403265
A 15	CASE, TOP(U11 PAL)	0VM100579
A 16	PANEL, BOTTOM (FTZRESET)	0VM201357
A 18 ⚠	LABEL, RATING (Model No. 9A-1011)	0VM406811
A 18 ⚠	LABEL, RATING (Model No. 9A-1211)	0VM406789
1B 1	DECK ASSEMBLY	N4106FK
2B 1	CHASSIS(U11 PAL)	0VM000085
2B 13	DECK SUPPORTER	0VM404958
2B 14	FIBER,TOP CASE	0VM406787
2L 021	SCREW, P-TIGHT 3X10 WASHER HEAD+	GCMP3100
2L 031	SCREW, P-TIGHT 3X10 BIND HEAD	GBMP3100
2L 041	SCREW, P-TIGHT 3X10 WASHER HEAD+	GCMP3100
2L 061	SCREW, P-TIGHT 4X12 BIND HEAD+	GBKP4120
2L 091	SCREW, A-TIGHT M3X8 BIND HEAD+	DBK13080
	PACKING	
S 1	GIFT BOX CARTON (Model No. 9A-1011)	0VM406810
S 1	GIFT BOX CARTON (Model No. 9A-1211)	0VM406788
S 2	STYROFOAM	0VM201336
S 3	ACCESSORY BAG 470X560X0.05T	Z547560
	ACCESSORY KIT	
X 1	REMOCON BOX RRS2000-7306CR	UREMT34SR015
X 2 ⚠	OWNER'S MANUAL (Model No. 9A-1011)	0VMN01652
X 2 ⚠	OWNER'S MANUAL (Model No. 9A-1211)	0VMN01653
X 3	RF CORD PAL 1.2M	WPZ0122LG001
X 4	DRY BATTERY UM-3(M) 2PCS PACK or	1790849
	DRY BATTERY UM3/RS6 2PCS PACK	579W099
X 10	ACCESSORY BAG	0VM404632

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that not assigned part numbers (-----------) are not available.

Tolerance of Capacitors and Resistors are noted with the following symbols.

C..........±0.25%	D..........±0.5%	F..........±1%
G..........±2%	J..........±5%	K..........±10%
M..........±20%	N..........±30%	Z..........+80/-20%

MCV CBA

Ref. No.	Description	Part No.
	MCV CBA Consists of the following:	0VSA07208
	MAIN CBA (MCV-A)	———
	FUNCTION CBA (MCV-B)	———
	REMOTE SENSOR CBA (MCV-D)	———

MAIN CBA (MCV-A)

Ref. No.	Description	Part No.
	MAIN CBA (MCV-A) Consists of the following:	———
	CAPACITORS	
C 1001 ⚠	METALLIZED FILM CAP. 0.047µF/250V K or	CT2E473NC011
	METALLIZED FILM CAP. 0.047µF/250V M or	CT2E473MS001
	METALLIZED FILM CAP. 0.047µF/250V M or	CT2E473UN009
	METALLIZED FILM CAP. 0.047µF/275V K or	CT2E473DT001
	METALLIZED FILM CAP. 0.047µF/250V K	CT2E473NC004
C 1002 ⚠	METALLIZED FILM CAP. 0.047µF/250V K or	CT2E473NC011
	METALLIZED FILM CAP. 0.047µF/250V M or	CT2E473MS001
	METALLIZED FILM CAP. 0.047µF/250V M or	CT2E473UN009
	METALLIZED FILM CAP. 0.047µF/275V K or	CT2E473DT001
	METALLIZED FILM CAP. 0.047µF/250V K	CT2E473NC004
C 1003 ⚠	SAFTY CAP. 2200pF/400V M or	CCN2HMA0E222
	SAFETY CAP. 2200pF/400V M	CCN2HMP0E222
C 1004	ELECTROLYTIC CAP. 22µF/400V M or	CA2H220NC010
	ELECTROLYTIC CAP. 22µF/400V M	CA2H220SP027
C 1005	CERAMIC CAP. 0.01µF/500V or	CA2J103TU001
	CERAMIC CAP. B K 0.01µF/500V or	CCD2JKD0B103
	CERAMIC CAP. B K 0.01µF/500V	CCD2JKP0B103
C 1006	CERAMIC CAP. SL J 120pF/1KV or	CA3A121MR506
	CERAMIC CAP. SL K 120pF/1KV	CCD3AKPSL121
C 1007	SEMICONDUCTOR CAP. SR K 0.039µF/25V or	CDA1EKS0X393
	SEMICONDUCTOR CAP. SR K 0.039µF/25V	12Y2393S
C 1008	CERAMIC CAP.(AX) X K 3300pF/16V or	CDA1CKT0X332
	CERAMIC CAP. X K 0.0033µF/16V	3X4C332T
C 1009	CERAMIC CAP.(AX) Y M 8200pF/16V or	CDA1CMT0Y822
	CERAMIC CAP. Y M 8200pF/16V	3Y4D822T
C 1010	SEMICONDUCTOR CAP. SR K 0.022µF/25V or	CDA1EKS0X223
	SEMICONDUCTOR CAP. SR K 0.022µF/25V	12Y2223S
C 1011	ELECTROLYTIC CAP. 4.7µF/50V M	CE1JMASDL4R7
C 1012	ELECTROLYTIC CAP. 470µF/16V M	CE1CMASDL471
C 1013	ELECTROLYTIC CAP. 22µF/50V M	CE1JMASDL220
C 1014	ELECTROLYTIC CAP. 330µF/16V M	CE1CMASDL331
C 1015	ELECTROLYTIC CAP. 330µF/16V M	CE1CMASDL331
C 1016	ELECTROLYTIC CAP. 1000µF/6.3V M	CE0KMASDL102
C 1017	ELECTROLYTIC CAP. 100µF/10V M	CE1AMASDL101
C 1018	CERAMIC CAP. F Z 0.01µF/50V or	CCD1JZS0F103
	CERAMIC CAP. F Z 0.01µF/50V	12F3103S
C 1019	SEMICONDUCTOR CAP. SR K 0.022µF/25V or	CDA1EKS0X223
	SEMICONDUCTOR CAP. SR K 0.022µF/25V	12Y2223S
C 1021	CERAMIC CAP.(AX) B J 150pF/50V or	CCA1JJT0B151
	CERAMIC CAP.(AX) B K 150pF/50V or	CCA1JKT0B151
	CERAMIC CAP. B J 150pF/50V or	3B41151T
	CERAMIC CAP. B K 150pF/50V	3B42151T
C 1022	*MYLAR CAP. 0.0012µF/100V J or	CMA2AJS00122
	MYLAR CAP. 0.0012µF/100V J	1255122S
C 1501	ELECTROLYTIC CAP. 0.47µF/50V M H7 or	CE1JMASSLR47
	ELECTROLYTIC CAP. 0.47µF/50V M H7	526W474S
C 1503	CERAMIC CAP.(AX) B J 470pF/50V or	CCA1JJT0B471
	CERAMIC CAP.(AX) B K 470pF/50V or	CCA1JKT0B471
	CERAMIC CAP. B J 470pF/50V or	3B41471T
	CERAMIC CAP. B K 470pF/50V	3B42471T
C 1504	ELECTRIC DOUBLE LAYER CAP. 0.022F/5.5V Z	CA0J223NE003
C 1505	ELECTROLYTIC CAP. 47µF/6.3V M	CE0KMASDL470
C 1506	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASDL471
C 1510	CERAMIC CAP.(AX) B J 150pF/50V or	CCA1JJT0B151
	CERAMIC CAP. (AX) B J 150pF/50V	CCA1JKT0B151
	CERAMIC CAP. B J 150pF/50V	3B41151T
	CERAMIC CAP. B J 150pF/50V	3B42151T
C 1511	CERAMIC CAP.(AX) F Z 0.022µF/25V or	CDA1EZT0F223
	CERAMIC CAP.(AX) F Z 0.022µF/25V	1220843T
C 3001	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 3002	ELECTROLYTIC CAP. 0.1µF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1µF/50V M H7	526W104S
C 3003	CERAMIC CAP.(AX) B J 150pF/50V or	CCA1JJT0B151
	CERAMIC CAP.(AX) B K 150pF/50V or	CCA1JKT0B151
	CERAMIC CAP. B J 150pF/50V or	3B41151T
	CERAMIC CAP. B K 150pF/50V	3B42151T
C 3004	CERAMIC CAP.(AX) SL J 68pF/50V or	CCA1JJTSL680
	CERAMIC CAP. SL J 68pF/50V	3S41680T
C 3005	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CNT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3006	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 3007	CERAMIC CAP.(AX) F Z 0.022µF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022µF/25V	1220843T
C 3008	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 3009	CERAMIC CAP.(AX) SL J 33pF/50V or	CCA1JJTSL330
	CERAMIC CAP. SL J 33pF/50V	3S41330T
C 3011	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 3012	CERAMIC CAP.(AX) SL J 33pF/50V or	CCA1JJTSL330
	CERAMIC CAP. SL J 33pF/50V	3S41330T
C 3013	CERAMIC CAP.(AX) SL J 27pF/50V or	CCA1JJTSL270
	CERAMIC CAP. SL J 27pF/50V	3S41270T
C 3015	CERAMIC CAP.(AX) B J 100pF/50V or	CCA1JJT0B101
	CERAMIC CAP.(AX) B K 100pF/50V or	CCA1JKT0B101
	CERAMIC CAP. B J 100pF/50V or	3B41101T
	CERAMIC CAP. B K 100pF/50V	3B42101T
C 3016	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390

* Mylar is a registered trademark of E. I. DuPont de Nemours and Company.

Ref. No.	Description	Part No.
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 3017	CERAMIC CAP.(AX) B J 270pF/50V or	CCA1JJT0B271
	CERAMIC CAP.(AX) B K 270pF/50V or	CCA1JKT0B271
	CERAMIC CAP. B J 270pF/50V or	3B41271T
	CERAMIC CAP. B K 270pF/50V	3B42271T
C 3020	CERAMIC CAP.(AX) B J 180pF/50V or	CCA1JJT0B181
	CERAMIC CAP.(AX) B K 180pF/50V or	CCA1JKT0B181
	CERAMIC CAP. B J 180pF/50V or	3B41181T
	CERAMIC CAP. B K 180pF/50V	3B42181T
C 3021	CERAMIC CAP.(AX) SL J 33pF/50V or	CCA1JJTSL330
	CERAMIC CAP. SL J 33pF/50V	3S41330T
C 3022	CERAMIC CAP.(AX) SL J 47pF/50V or	CCA1JJTSL470
	CERAMIC CAP. SL J 47pF/50V	3S41470T
C 3023	CERAMIC CAP.(AX) SL J 68pF/50V or	CCA1JJTSL680
	CERAMIC CAP. SL J 68pF/50V	3S41680T
C 3024	CERAMIC CAP.(AX) SL J 22pF/50V or	CCA1JJTSL220
	CERAMIC CAP. SL J 22pF/50V	3S41220T
C 3025	ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1µF/50V M H7	526W105S
C 3026	CERAMIC CAP.(AX) B J 390pF/50V or	CCA1JJT0B391
	CERAMIC CAP.(AX) B K 390pF/50V or	CCA1JKT0B391
	CERAMIC CAP. B J 390pF/50V or	3B41391T
	CERAMIC CAP. B K 390pF/50V	3B42391T
C 3027	CERAMIC CAP.(AX) SL J 18pF/50V or	CCA1JJTSL180
	CERAMIC CAP. SL J 18pF/50V	3S41180T
C 3028	CERAMIC CAP.(AX) B J 100pF/50V or	CCA1JJT0B101
	CERAMIC CAP.(AX) B K 100pF/50V or	CCA1JKT0B101
	CERAMIC CAP. B J 100pF/50V or	3B41101T
	CERAMIC CAP. B K 100pF/50V	3B42101T
C 3029	ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10µF/16V M H7	526T106S
C 3030	ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10µF/16V M H7	526T106S
C 3032	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3033	CERAMIC CAP.(AX) F Z 0.022µF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022µF/25V	1220843T
C 3034	CERAMIC CAP.(AX) F Z 0.022µF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022µF/25V	1220843T
C 3035	ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1µF/50V M H7	526W105S
C 3036	ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1µF/50V M H7	526W105S
C 3037	SEMICONDUCTOR CAP. SR K 0.01µF/25V or	CDA1EKS0X103
	SEMICONDUCTOR CAP. SR K 0.01µF/25V	12Y2103S
C 3038	ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10µF/16V M H7	526T106S
C 3039	ELECTROLYTIC CAP. 4.7µF/50V M H7 or	CE1JMASSL4R7
	ELECTROLYTIC CAP. 4.7µF/50V M H7	526W475S
C 3040	ELECTROLYTIC CAP. 4.7µF/25V M H7 or	CE1EMASSL4R7
	ELECTROLYTIC CAP. 4.7µF/25V M H7	526U475S
C 3043	ELECTROLYTIC CAP. 220µF/6.3V M H7 or	CE0KMASSL221
	ELECTROLYTIC CAP. 220µF/6.3V M H7	526R227S
C 3044	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 3045	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 3046	SEMICONDUCTOR CAP. SR K 0.022µF/25V or	CDA1EKS0X223
	SEMICONDUCTOR CAP. SR K 0.022µF/25V	12Y2223S
C 3047	ELECTROLYTIC CAP. 4.7µF/25V M H7 or	CE1EMASSL4R7
	ELECTROLYTIC CAP. 4.7µF/25V M H7	526U475S
C 3048	ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1µF/50V M H7	526W105S
C 3049	SEMICONDUCTOR CAP. SR K 0.01µF/25V or	CDA1EKS0X103
	SEMICONDUCTOR CAP. SR K 0.01µF/25V	12Y2103S
C 3050	SEMICONDUCTOR CAP. SR K 0.01µF/25V or	CDA1EKS0X103
	SEMICONDUCTOR CAP. SR K 0.01µF/25V	12Y2103S
C 3051	ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMASSL010

Ref. No.	Description	Part No.
	ELECTROLYTIC CAP. 1µF/50V M H7	526W105S
C 3052	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3053	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3054	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 3055	CERAMIC CAP.(AX) F Z 0.047µF/50V	CCA1JZT0F473
C 3056	ELECTROLYTIC CAP. 22µF/50V M H7 or	CE1JMASSL220
	ELECTROLYTIC CAP. 22µF/50V M H7	526W226S
C 3057	ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1µF/50V M H7	526W105S
C 3058	PCB JUMPER D0.6-P5.0	JW5.0T
C 3059	CERAMIC CAP.(AX) X K 2200pF/16V or	CDA1CKT0X222
	CERAMIC CAP. X K 0.0022µF/16V	3X4C222T
C 3062	ELECTROLYTIC CAP. 0.1µF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1µF/50V M H7	526W104S
C 3063	CERAMIC CAP.(AX) B J 220pF/50V or	CCA1JJT0B221
	CERAMIC CAP.(AX) B K 220pF/50V or	CCA1JKT0B221
	CERAMIC CAP. B J 220pF/50V or	3B41221T
	CERAMIC CAP. B K 220pF/50V	3B42221T
C 3064	CERAMIC CAP.(AX) SL J 15pF/50V or	CCA1JJTSL150
	CERAMIC CAP. SL J 15pF/50V	3S41150T
C 3065	CERAMIC CAP.(AX) SL J 39pF/50V or	CCA1JJTSL390
	CERAMIC CAP. SL J 39pF/50V	3S41390T
C 3066	CERAMIC CAP.(AX) SL J 22pF/50V or	CCA1JJTSL220
	CERAMIC CAP. SL J 22pF/50V	3S41220T
C 3071	CERAMIC CAP.(AX) SL J 15pF/50V or	CCA1JJTSL150
	CERAMIC CAP. SL J 15pF/50V	3S41150T
C 3080	CERAMIC CAP.(AX) F Z 0.047µF/50V	CCA1JZT0F473
C 3081	CERAMIC CAP. (AX) SL J 56pF/50V or	CCA1JJTSL560
	CERAMIC CAP. SL J 56pF/50V	3S41560T
C 3082	CERAMIC CAP. (AX) Y M 0.01µF/16V	CDA1CMT0Y103
C 3090	ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASDL471
C 3091	ELECTROLYTIC CAP. 100µF/16V M	CE1CMASDL101
C 4001	CERAMIC CAP. (AX) X K 1200pF/16V or	CCD1CKT0X122
	CERAMIC CAP. X K 0.0012µF/16V	3X4C122T
C 4002	CERAMIC CAP.(AX) X K 1800pF/16V or	CDA1CKT0X182
	CERAMIC CAP. X K 0.0018µF/16V	3X4C182T
C 4003	CERAMIC CAP.(AX) Y M 0.01µF/16V	CDA1CMT0Y103
C 4004	ELECTROLYTIC CAP. 22µF/16V M H7 or	CE1CMASSL220
	ELECTROLYTIC CAP. 22µF/16V M H7	526T226S
C 4005	ELECTROLYTIC CAP. 4.7µF/25V M H7 or	CE1EMASSL4R7
	ELECTROLYTIC CAP. 4.7µF/25V M H7	526U475S
C 4006	ELECTROLYTIC CAP. 0.1µF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1µF/50V M H7	526W104S
C 4007	ELECTROLYTIC CAP. 3.3µF/50V M H7 or	CE1JMASSL3R3
	ELECTROLYTIC CAP. 3.3µF/50V M H7	526W335S
C 4008	ELECTROLYTIC CAP. 0.1µF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1µF/50V M H7	526W104S
C 4009	CERAMIC CAP.(AX) X K 6800pF/16V or	CDA1CKT0X682
	CERAMIC CAP. X K 0.0068µF/16V	3X4C682T
C 4010	ELECTROLYTIC CAP. 4.7µF/25V M H7 or	CE1EMASSL4R7
	ELECTROLYTIC CAP. 4.7µF/25V M H7	526U475S
C 4011	ELECTROLYTIC CAP. 0.1µF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1µF/50V M H7	526W104S
C 4012	ELECTROLYTIC CAP. 0.1µF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1µF/50V M H7	526W104S
C 4013	ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1µF/50V M H7	526W105S
C 4014	ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10µF/16V M H7	526T106S
C 4015	ELECTROLYTIC CAP. 47µF/16V M H7 or	CE1CMASSL470
	ELECTROLYTIC CAP. 47µF/16V M H7	526T476S
C 4016	SEMICONDUCTOR CAP. SR K 0.01µF/25V or	CDA1EKS0X103
	SEMICONDUCTOR CAP. SR K 0.01µF/25V	12Y2103S
C 4017	SEMICONDUCTOR CAP. SR K 0.01µF/25V or	CDA1EKS0X103

Ref. No.	Description	Part No.
	SEMICONDUCTOR CAP. SR K 0.01µF/25V	12Y2103S
C 4019	MYLAR CAP. 0.022µF/100V J or	CMA2AJS00223
	MYLAR CAP. 0.022µF/100V J	1255223S
C 4022	CERAMIC CAP.(AX) X K 2700pF/16V or	CDA1CKT0X272
	CERAMIC CAP. X K 0.0027µF/16V	3X4C272T
C 4023	CERAMIC CAP.(AX) B J 220pF/50V or	CCA1JJT0B221
	CERAMIC CAP.(AX) B K 220pF/50V or	CCA1JKT0B221
	CERAMIC CAP. B J 220pF/50V or	3B41221T
	CERAMIC CAP. B K 220pF/50V	3B42221T
C 5110	SEMICONDUCTOR CAP. F Z 0.1µF/25V or	CDA1EZS0F104
	SEMICONDUCTOR CAP. F Z 0.1µF/25V	1220520S
C 6001	CERAMIC CAP.(AX) X K 1500pF/16V or	CDA1CKT0X152
	CERAMIC CAP. X K 0.0015µF/16V	3X4C152T
C 6002	ELECTROLYTIC CAP. 22µF/10V M	CE1AMASDL220
C 6003	ELECTROLYTIC CAP. 1µF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1µF/50V M H7	526W105S
C 6004	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
	(C6004 Used only if IC6004: LB1641)	
C 6005	CERAMIC CAP.(AX) SL J 10pF/50V or	CCA1JJTSL100
	CERAMIC CAP. SL J 10pF/50V	3S41100T
C 6006	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 6007	ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10µF/16V M H7	526T106S
C 6008	ELECTROLYTIC CAP. 33µF/6.3V M H7 or	CE0KMASSL330
	ELECTROLYTIC CAP. 33µF/6.3V M H7	526R336S
C 6009	CERAMIC CAP.(AX) F Z 0.022µF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022µF/25V	1220843T
C 6010	CERAMIC CAP.(AX) SL J 27pF/50V or	CCA1JJTSL270
	CERAMIC CAP. SL J 27pF/50V	3S41270T
C 6011	CERAMIC CAP.(AX) SL J 27pF/50V or	CCA1JJTSL270
	CERAMIC CAP. SL J 27pF/50V	3S41270T
C 6012	ELECTROLYTIC CAP. 100µF/6.3V M H7 or	CE0KMASSL101
	ELECTROLYTIC CAP. 100µF/6.3V M H7	526R107S
C 6013	CERAMIC CAP.(AX) F Z 0.022µF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022µF/25V	1220843T
C 6014	CERAMIC CAP.(AX) F Z 0.022µF/25V or	CDA1EZT0F223
	CERAMIC CAP. F Z 0.022µF/25V	1220843T
C 6015	CERAMIC CAP.(AX) X K 6800pF/16V or	CDA1CKT0X682
	CERAMIC CAP. X K 0.0068µF/16V	3X4C682T
C 6016	ELECTROLYTIC CAP. 47µF/6.3V M H7 or	CE0KMASSL470
	ELECTROLYTIC CAP. 47µF/6.3V M H7	526R476S
C 6018	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001µF/50V or	3B41102T
	CERAMIC CAP. B K 0.001µF/50V	3B42102T
C 6019	CERAMIC CAP.(AX) B J 330pF/50V or	CCA1JJT0B331
	CERAMIC CAP.(AX) B K 330pF/50V or	CCA1JKT0B331
	CERAMIC CAP. B J 330pF/50V or	3B41331T
	CERAMIC CAP. B K 330pF/50V	3B42331T
C 6020	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 6021	ELECTROLYTIC CAP. 22µF/16V M H7 or	CE1CMASSL220
	ELECTROLYTIC CAP. 22µF/16V M H7	526T226S
C 6022	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 6023	ELECTROLYTIC CAP. 47µF/6.3V M H7 or	CE0KMASSL470
	ELECTROLYTIC CAP. 47µF/6.3V M H7	526R476S
C 6025	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001µF/50V or	3B41102T
	CERAMIC CAP. B K 0.001µF/50V	3B42102T
C 6027	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 6029	ELECTROLYTIC CAP. 10µF/16V M LL H7 or	CA1C100SP018
	ELECTROLYTIC CAP. 10µF/16V M LL H7	CE1CMASHL100
C 6030	ELECTROLYTIC CAP. 2.2µF/50V M H7 or	CE1JMASSL2R2

Ref. No.	Description	Part No.
	ELECTROLYTIC CAP. 2.2µF/50V M H7	526W225S
C 6031	ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10µF/16V M H7	526T106S
C 6032	CERAMIC CAP.(AX) X K 2200pF/16V or	CDA1CKT0X222
	CERAMIC CAP. X K 0.0022µF/16V	3X4C222T
C 6033	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001µF/50V or	3B41102T
	CERAMIC CAP. B K 0.001µF/50V	3B42102T
C 6034	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001µF/50V or	3B41102T
	CERAMIC CAP. B K 0.001µF/50V	3B42102T
C 6035	ELECTROLYTIC CAP. 10µF/16V M H7 or	CE1CMASSL100
	ELECTROLYTIC CAP. 10µF/16V M H7	526T106S
C 6036	CERAMIC CAP.(AX) F Z 0.047µF/50V	CCA1JZT0F473
C 6038	CERAMIC CAP.(AX) Y M 0.01µF/16V or	CDA1CMT0Y103
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 7001	CERAMIC CAP.(AX) F Z 0.047µF/50V	CCA1JZT0F473
C 7002	CERAMIC CAP.(AX) F Z 0.047µF/50V	CCA1JZT0F473
C 7003	CERAMIC CAP.(AX) X K 2200pF/16V or	CDA1CKT0X222
	CERAMIC CAP. X K 0.0022µF/16V	3X4C222T
C 7005	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001µF/50V or	3B41102T
	CERAMIC CAP. B K 0.001µF/50V	3B42102T
C 7006	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C 7008	CERAMIC CAP.(AX) SL J 56pF/50V or	CCA1JJTSL560
	CERAMIC CAP. SL J 56pF/50V	3S41560T
C 7009	ELECTROLYTIC CAP. 47µF/35V M	CE1GMASDL470
C 7010	MYLAR CAP. 0.033µF/50V J or	CMA1JJS00333
	MYLAR CAP. 0.033µF/50V J	2254333S
C 7011	MYLAR CAP. 0.033µF/50V J or	CMA1JJS00333
	MYLAR CAP. 0.033µF/50V J	2254333S
C 7012	MYLAR CAP. 0.033µF/50V J or	CMA1JJS00333
	MYLAR CAP. 0.033µF/50V J	2254333S
C 7013	CERAMIC CAP.(AX) X K 2200pF/16V or	CDA1CKT0X222
	CERAMIC CAP. X K 0.0022µF/16V	3X4C222T
C 7014	CERAMIC CAP.(AX) X K 2200pF/16V or	CDA1CKT0X222
	CERAMIC CAP. X K 0.0022µF/16V	3X4C222T
C 7015	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001µF/50V or	3B41102T
	CERAMIC CAP. B K 0.001µF/50V	3B42102T
C 7016	ELECTROLYTIC CAP. 470µF/10V M	CE1AMASDL471
C 7017	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 7020	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001µF/50V or	3B41102T
	CERAMIC CAP. B K 0.001µF/50V	3B42102T
C 7021	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
C 7026	ELECTROLYTIC CAP. 1µF/50V M	CE1JMASDL010
C 7502	ELECTROLYTIC CAP. 10µF/16V M	CE1CMASDL100
C 7503	CERAMIC CAP.(AX) X K 3300pF/16V or	CDA1CKT0X332
	CERAMIC CAP. X K 0.0033µF/16V	3X4C332T
C 7504	CERAMIC CAP.(AX) B J 470pF/50V or	CCA1JJT0B471
	CERAMIC CAP.(AX) B K 470pF/50V or	CCA1JKT0B471
	CERAMIC CAP. B J 470pF/50V or	3B41471T
	CERAMIC CAP. B K 470pF/50V	3B42471T
C 7505	CERAMIC CAP.(AX) B J 150pF/50V or	CCA1JJT0B151
	CERAMIC CAP.(AX) B K 150pF/50V or	CCA1JKT0B151
	CERAMIC CAP. B J 150pF/50V or	3B41151T
	CERAMIC CAP. B K 150pF/50V	3B42151T
C 7506	CERAMIC CAP.(AX) F Z 0.1µF/50V	CCA1JZT0F104
	CONNECTORS	
CN3001	STRAIGHT PIN CONNECTOR, 15P	1770635

Ref. No.	Description	Part No.
CN5101	STRAIGHT PIN CONNECTOR, 9P	1770629
CN6001	STRAIGHT PIN CONNECTOR, 20P	1770640
CN6002	STRAIGHT PIN CONNECTOR, 3P	1770623
	DIODES	
D 1001	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 1002	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 1003	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 1004	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 1005	RECTIFIER DIODE EG01C or	QDPZ000EG01C
	FAST RECOVERY DIODE AP01C or	AAP01C000000
	RECTIFIER DIODE ERA22-10Y2(TYPE I) or	QDQZ0ERA2210
	FAST RECOVERY DIODE RGP10K	ND8Z00RGP10K
D 1006	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 1007	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 1008	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 1009	RECTIFIER DIODE EG01C or	QDPZ000EG01C
	FAST RECOVERY DIODE AP01C or	AAP01C000000
	RECTIFIER DIODE ERA22-10Y2(TYPE I) or	QDQZ0ERA2210
	FAST RECOVERY DIODE RGP10K	ND8Z00RGP10K
D 1010	RECTIFIER DIODE RU3YX LF-C4 or	QD7Z000RU3YX
	FAST RECOVERY DIODE EGP20B or	NDQB000EGP20
	FAST RECOVERY DIODE EGP20D	NDQD000EGP20
D 1011	SWITCHING DIODE MA188 or	QDTZ000MA188
	SWITCHING DIODE BAV21	NDQZ000BAV21
D 1012	SCHOTTKY BARRIER DIODE AK04 or	QDQZ0000AK04
	SCHOTTKY BARRIER DIODE ERA81-004 or	QDQZERA81004
	SCHOTTKY BARRIER DIODE SB040 or	NDQZ000SB040
	SCHOTTKY BARRIER DIODE 11EQS04	QD4Z011EQS04
D 1013	SWITCHING DIODE MA178 or	QDTZ000MA178
	SWITCHING DIODE BAV18	NDQZ000BAV18
D 1016	ZENER DIODE UZ-6.8BSA	QDTA0UZ6R8BS
D 1501	ZENER DIODE UZ-6.2BSB	QDTB0UZ6R2BS
D 1502	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 1504	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 1505	ZENER DIODE UZ-9.1BSC	QDTC0UZ9R1BS
D 1506	ZENER DIODE UZ-9.1BSC	QDTC0UZ9R1BS
D 1507	ZENER DIODE UZ-30BSA	QDTA00UZ30BS
D 1508	RECTIFIER DIODE 1A5 or	NDQZ000001A5
	RECTIFIER DIODE 1N4005 or	ND8Z001N4005
	RECTIFIER DIODE 1N4005E or	NDQZ01N4005E
	RECTIFIER DIODE 1N4005	NDQZ001N4005
D 3002	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 3003	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 3006	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 3007	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 6001	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 6004	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 6005	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 6006	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 6007	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
D 6008	LED SID1K10CXM or	QP4ZD1K10CXM
	LED LN66A.FN or	QP7Z0O0LN66A
	LED SLR-932C-20-AB	QPQ80SLR932C
D 7001	ZENER DIODE UZ-6.2BSB	QDTB0UZ6R2BS
D 7002	ZENER DIODE UZ-6.2BSB	QDTB0UZ6R2BS
D 7003	ZENER DIODE UZ-6.2BSB	QDTB0UZ6R2BS
D 7501	ZENER DIODE UZ-5.1BS	QDTZ0UZ5R1BS
D 7502	ZENER DIODE UZ-5.1BS	QDTZ0UZ5R1BS
D 7503	ZENER DIODE UZ-5.1BS	QDTZ0UZ5R1BS
D 7504	ZENER DIODE UZ-5.1BS	QDTZ0UZ5R1BS
D 7505	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1N4148M or	QDTZ01N4148M
	SWITCHING DIODE GMB01-BT	GMB01BT
	ICS	
IC1001 ⚠	PHOTOCOUPLER PC120F or	QPEZ0OPC120F
	PHOTOCOUPLER PC120 or	QP5Z0O0PC120
	PHOTOCOUPLER PS2561-1M or	QPEN0PS25611
	PHOTOCOUPLER PS2561-1D or	QPED0PS25611
	PHOTOCOUPLER PS2561-1H or	QPEH0PS25611
	PHOTOCOUPLER PS2561-1W	QPEW0PS25611
IC1002	IC KIA431 or	NSZLA0ZJY001
	IC KA431Z or	NSZLA0ZSM001
	IC L5431 or	QSZLA0ZSY004
	IC AN1431T-(NSC)	QSBLA0ZMS001
IC3001	IC, VIDEO LA7347	QSZLA0SSY006
IC3002	IC LC89972M	QSMLA0SSY011
IC4001	IC:AUDIO LA7286	QSZLA0SSY007
IC6001	MICROCONTROLLER 8BIT SY/CXP88220-110Q	QSMCB0RSN039
IC6002	IC, COMPARATOR KIA339P or	NSBLA0SJY019
	IC, COMPARATOR KA339 or	NSBLA0SSM002
	IC, COMPARATOR NJM2901N	QSBLA0SJR040
IC6003	IC:OP-AMP. KIA324P DIP-14 or	NSBLA0SJY002
	IC, OP-AMP. KA324	NSBLA0SSM001
IC6004	IC TA7291S (Used C6006)	14LW342
IC6004	IC LB1641 (Used C6004)	QSBLA0SSY045
IC6008	IC X24C01AP or	NSMNA0SXC002
	IC ST24C01B1 or	NSMNA0ZSS002
	IC:MEMORY 24LC01B/P	NSMNA0SMH002
IC7001	ZENER DIODE UZT33MTA	QCTZ0OUZT33M
IC7501	IC NJU4052BD or	14D048
	IC UPD4052BC or	QSMLA0SNE004

Ref. No.	Description	Part No.
	IC TC4052BP or	QSMLA0STS003
	IC HEF4052BP	NSMLA0SPH001
	COILS	
L 1001 ⚠	LINE FILTER FK0B160MH16 or	1170567
	LINE FILTER TL81-015-102	LLBT00ZPC002
L 1002 ⚠	LINE FILTER 51mH UU10LF or	LLBG00ZSF003
	LINE FILTER 51mH 53230	LLBG00ZKT002
L 1003	LEAD INDUCTOR 22µH-K or	LLARKLUTU220
	LEAD INDUCTOR 22µH-K or	LLARKMPKV220
	LEAD INDUCTOR 22µH-K	LLARKMPFG220
L 1004	LEAD INDUCTOR 22µH-K or	LLARKLUTU220
	LEAD INDUCTOR 22µH-K or	LLARKMPKV220
	LEAD INDUCTOR 22µH-K	LLARKMPFG220
L 1005	BEAD CORE HF70BB3.5X10X1.3 or	XL03010TE001
	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L 1006	BEAD CORE HF70BB3.5X10X1.3 or	XL03010TE001
	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L 3001	INDUCTOR 180µH-K-26T or	LLAXKDTKA181
	INDUCTOR 180µH-K-26T	LLAXKATTU181
L 3002	INDUCTOR 82µH-K	LLAXKCPFG820
L 3003	INDUCTOR 330µH-K-26T or	LLAXKDTKA331
	INDUCTOR 330µH-J-26T	LLAXJATTU331
L 3004	INDUCTOR 56µH-K	LLAXKCPFG560
L 3005	INDUCTOR 27µH-K	LLAXKCPFG270
L 3006	INDUCTOR 10µH-K-26T or	LLAXKDTKA100
	INDUCTOR 10µH-K-26T	LLAXKATTU100
L 3007	INDUCTOR 330µH-K-26T or	LLAXKDTKA331
	INDUCTOR 330µH-J-26T	LLAXJATTU331
L 3008	INDUCTOR 27µH-K	LLAXKCPFG270
L 3009	INDUCTOR 68µH-K	LLAXKCPFG680
L 3010	INDUCTOR 68µH-K	LLAXKCPFG680
L 3012	INDUCTOR 22µH-K-5FT or	LLARKDSKA220
	INDUCTOR 22µH-K-5FT or	LLARKBSTU220
	INDUCTOR 22µH-K-5FT or	LLARKBSFS220
	INDUCTOR 22µH-K-5FT or	LLARKMSFS220
	INDUCTOR 22µH-K	LLAXKCPFG220
L 3014	INDUCTOR 4.7µH-K-5FT or	LLARKDSKA4R7
	INDUCTOR 4.7µH-K-5FT or	LLARKBSTU4R7
	INDUCTOR 4.7µH-K-5FT or	LLARKBSFS4R7
	INDUCTOR 4.7µH-K-5FT or	LLARKMSFS4R7
	INDUCTOR 4.7µH-K	LLAXKCPFG4R7
L 3016	INDUCTOR 47µH-K	LLAXKCPFG470
L 3017	PCB JUMPER D0.6-P5.0	JW5.0T
L 3020	INDUCTOR 18µH-K-26T or	LLAXKDTKA180
	INDUCTOR 18µH-K-26T or	LLAXKATTU180
	INDUCTOR 18µH-K	LLAXKCPFG180
L 6002	INDUCTOR 100µH-K-5FT or	LLARKDSKA101
	INDUCTOR 100µH-K-5FT or	LLARKCSTU101
	INDUCTOR 100µH-K-5FT or	LLARKBSFS101
	INDUCTOR 100µH-K-5FT or	LLARKMSFS101
	INDUCTOR 100µH-K	LLAXKCPFG101
L 6003	INDUCTOR 15µH-K-26T or	LLAXKDTKA150
	INDUCTOR 15µH-K-26T or	LLAXKATTU150
	INDUCTOR 15µH-K	LLAXKCPFG150
L 7001	PCB JUMPER D0.6-P5.0	JW5.0T
L 7002	PCB JUMPER D0.6-P5.0	JW5.0T
T 4001	COIL, OSC 1027QM30003B7- or	LFA07V0VD003
	COIL, OSC R-12 P687 X or	LFA07V0MM045
	COIL, OSC 7L1A35N	LFA07V0LH002
	TRANSISTORS	
Q 1001	TRANSISTOR 2SC4204 or	QQSZ02SC4204
	TRANSISTOR 2SC3576	QQSZ02SC3576
Q 1002 ⚠	TRANSISTOR 2SC4517 or	QQPZ02SC4517
	TRANSISTOR 2SC5239 or	QQQZ02SC5239
	TRANSISTOR 2SC3866	QQPZ02SC3866
Q 1501	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KSC2785(Y) or	NQSY0KSC2785
	TRANSISTOR KSC2785(G) or	NQSG0KSC2785
	TRANSISTOR 2SC536SP(E) or	C536SEZ
	TRANSISTOR 2SC536SP(F)	C536SFZ
Q 1502	TRANSISTOR 2SD400(F)	D400FZ
Q 1503	RES. BUILT-IN TRANSISTOR KSR2205 or	NQSZ0KSR2205
	RES. BUILT-IN TRANSISTOR 2SA1654	QQSZ02SA1654
Q 1504	RES. BUILT-IN TRANSISTOR KRA103M or	NQSZ0KRA103M
	RES. BUILT-IN TRANSISTOR KSR2203 or	NQSZ0KSR2203
	RES. BUILT-IN TRANSISTOR 2SA1346	A1346Z
Q 1505	TRANSISTOR KTA1266(Y) or	NQSY0KTA1266
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1317(S) or	A1317SZ
	TRANSISTOR 2SA1317(T)	A1317TZ
Q 1506	TRANSISTOR KTA1266(Y) or	NQSY0KTA1266
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1317(S) or	A1317SZ
	TRANSISTOR 2SA1317(T)	A1317TZ
Q 1507	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR KSR1203 or	NQSZ0KSR1203
	RES. BUILT-IN TRANSISTOR 2SC3400	C3400Z
Q 1508	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR KSR1203 or	NQSZ0KSR1203
	RES. BUILT-IN TRANSISTOR 2SC3400	C3400Z
Q 3001	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KSC2785(Y) or	NQSY0KSC2785
	TRANSISTOR KSC2785(G) or	NQSG0KSC2785
	TRANSISTOR 2SC536SP(E) or	C536SEZ
	TRANSISTOR 2SC536SP(F)	C536SFZ
Q 3003	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193
	TRANSISTOR.2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 3004	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193
	TRANSISTOR 2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 3009	TRANSISTOR KTA1267(Y) or	NQSY0KTA1267
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KSA1175(Y) or	NQSY0KSA1175
	TRANSISTOR KSA1175(G) or	NQSG0KSA1175
	TRANSISTOR 2SA608SP(E) or	A608SEZ
	TRANSISTOR 2SA608SP(F)	A608SFZ
Q 3010	TRANSISTOR KTA1267(Y) or	NQSY0KTA1267
	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KSA1175(Y) or	NQSY0KSA1175
	TRANSISTOR KSA1175(G) or	NQSG0KSA1175
	TRANSISTOR 2SA608SP(E) or	A608SEZ
	TRANSISTOR 2SA608SP(F)	A608SFZ
Q 3011	RES. BUILT-IN TRANSISTOR KRA109M or	NQSZ0KRA109M
	RES. BUILT-IN TRANSISTOR KSR2208 or	NQSZ0KSR2208
	RES. BUILT-IN TRANSISTOR 2SA1347	QQSZ02SA1347
Q 3012	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR KSR1203 or	NQSZ0KSR1203
	RES. BUILT-IN TRANSISTOR 2SC3400	C3400Z
Q 3013	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193
	TRANSISTOR 2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 3014	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193
	TRANSISTOR 2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 3090	TRANSISTOR KTA1266(Y) or	NQSY0KTA1266
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1317(S) or	A1317SZ
	TRANSISTOR 2SA1317(T)	A1317TZ
Q 3091	RES. BUILT-IN TRANSISTOR KRC106M or	NQSZ0KRC106M

Ref. No.	Description	Part No.
	RES. BUILT-IN TRANSISTOR KSR1214 or	NQSZ0KSR1214
	RES. BUILT-IN TRANSISTOR 2SC4133	QQSZ02SC4133
Q 4001	TRANSISTOR 2SC3331(T) or	QSC3331TNPAA
	TRANSISTOR 2SC3331(U)	QSC3331UNPAA
Q 6004	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR KSR1203 or	NQSZ0KSR1203
	RES. BUILT-IN TRANSISTOR 2SC3400	C3400Z
Q 6005	RES. BUILT-IN TRANSISTOR KRA103M or	NQSZ0KRA103M
	RES. BUILT-IN TRANSISTOR KSR2203 or	NQSZ0KSR2203
	RES. BUILT-IN TRANSISTOR 2SA1346	A1346Z
Q 6007	PHOTO TRANSISTOR PT380FAB	QP7ZPT380FAB
Q 6008	PHOTO TRANSISTOR PT380FAB	QP7ZPT380FAB
Q 6010	TRANSISTOR KTC3199(BL) or	NQS50KTC3199
	TRANSISTOR KSC2785(L) or	NQSL0KSC2785
	TRANSISTOR 2SC536SP(G)	QQSGSC536SPA
Q 7001	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR KSC2785(Y) or	NQSY0KSC2785
	TRANSISTOR KSC2785(G) or	NQSG0KSC2785
	TRANSISTOR 2SC536SP(E) or	C536SEZ
	TRANSISTOR 2SC536SP(F)	C536SFZ
Q 7002	RES. BUILT-IN TRANSISTOR KSR2205 or	NQSZ0KSR2205
	RES. BUILT-IN TRANSISTOR 2SA1654	QQSZ02SA1654
Q 7003	RES. BUILT-IN TRANSISTOR KSR2205 or	NQSZ0KSR2205
	RES. BUILT-IN TRANSISTOR 2SA1654	QQSZ02SA1654
Q 7004	RES. BUILT-IN TRANSISTOR KSR2205 or	NQSZ0KSR2205
	RES. BUILT-IN TRANSISTOR 2SA1654	QQSZ02SA1654·
Q 7007	TRANSISTOR KTC3203 (Y) or	NQSY0KTC3203
	TRANSISTOR 2SD734F-NP-AQ or	QQSF002SD734
	TRANSISTOR 2SD734G-NP-AQ or	QQSG002SD734
	TRANSISTOR 2SC-2120-Y	QQSY02SC2120
	RESISTORS	
R 1001	FIXED METAL OXIDE FILM RES. 2W J 4.7 Ω	RN024R7KE005
R 1002	FIXED METAL OXIDE FILM RES. 2W J 82K Ω or	1330513
	FIXED METAL OXIDE FILM RES. 2W J 82K Ω or	RN02JZPZ0823
	FIXED METAL OXIDE FILM RES. 2W J 82K Ω	RN02823KE009
R 1004	CARBON RES. 1/4W J 82K Ω	RCX4JATZ0823
R 1005	CARBON RES. 1/4W J 82K Ω	RCX4JATZ0823
R 1006	CARBON RES. 1/4W J 82K Ω	RCX4JATZ0823
R 1007	CARBON RES. 1/4W J 82K Ω	RCX4JATZ0823
R 1008	CARBON RES. 1/4W J 27 Ω	RCX4JATZ0270
R 1009	CARBON RES. 1/4W J 27 Ω	RCX4JATZ0270
R 1010	CARBON RES. 1/4W J 27 Ω	RCX4JATZ0270
R 1011	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 1012	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 1017	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 1018	CARBON RES. 1/4W J 2.7 Ω	RCX4JATZ02R7
R 1019	CARBON RES. 1/4W J 2.7 Ω	RCX4JATZ02R7
R 1020	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 1021	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 1023	CARBON RES. 1/4W G 2.2K Ω	RCX4GATZ0222
R 1024	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 1025	CARBON RES. 1/4W G 2K Ω	RCX4GATZ0202
R 1501	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 1502	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 1503	PCB JUMPER D0.6-P5.0	JW5.0T
R 1504	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 1505	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 1506	CARBON RES. 1/4W J 1.5K Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5K Ω	RCX6JATZ0152
R 1507	CARBON RES. 1/4W J 1.3K Ω or	RCX4JATZ0132
	CARBON RES. 1/6W J 1.3K Ω	RCX6JATZ0132
R 1508	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104

Ref. No.	Description	Part No.
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 1509	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 1510	PCB JUMPER D0.6-P5.0	JW5.0T
R 1511	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 1512	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 1513	PCB JUMPER D0.6-P5.0	JW5.0T
R 1514	CARBON RES. 1/4W J 47K Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47K Ω	RCX6JATZ0473
R 1515	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 1516	CARBON RES. 1/4W J 56 Ω or	RCX4JATZ0560
	CARBON RES. 1/6W J 56 Ω	RCX6JATZ0560
R 1517	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 1521	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 3001	CARBON RES. 1/4W J 1.5K Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5K Ω	RCX6JATZ0152
R 3002	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 3003	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 3004	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 3005	CARBON RES. 1/4W J 1.5K Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5K Ω	RCX6JATZ0152
R 3006	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 3007	CARBON RES. 1/4W J 1.5K Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5K Ω	RCX6JATZ0152
R 3008	CARBON RES. 1/4W J 5.6K Ω or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 3009	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 3010	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 3011	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 3012	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 3013	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R 3014	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 3016	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 3017	CARBON RES. 1/4W J 390 Ω or	RCX4JATZ0391
	CARBON RES. 1/6W J 390 Ω	RCX6JATZ0391
R 3018	CARBON RES. 1/4W J 390 Ω or	RCX4JATZ0391
	CARBON RES. 1/6W J 390 Ω	RCX6JATZ0391
R 3019	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 3020	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 3021	CARBON RES. 1/4W J 1.2K Ω or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2K Ω	RCX6JATZ0122
R 3022	CARBON RES. 1/4W J 270 Ω or	RCX4JATZ0271
	CARBON RES. 1/6W J 270 Ω	RCX6JATZ0271
R 3024	CARBON RES. 1/4W J 27K Ω or	RCX4JATZ0273
	CARBON RES. 1/6W J 27K Ω	RCX6JATZ0273
R 3025	CARBON RES. 1/4W J 8.2K Ω or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2K Ω	RCX6JATZ0822
R 3026	CARBON RES. 1/4W J 6.8K Ω or	RCX4JATZ0682
	CARBON RES. 1/6W J 6.8K Ω	RCX6JATZ0682
R 3027	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 3028	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 3029	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 3031	CARBON RES. 1/4W J 16K Ω or	RCX4JATZ0163
	CARBON RES. 1/6W J 16K Ω	RCX6JATZ0163
R 3035	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 3036	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 3038	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472

Ref. No.	Description	Part No.
R 3039	CARBON RES. 1/4W J 1.5K Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5K Ω	RCX6JATZ0152
R 3040	CARBON RES. 1/4W J 390 Ω or	RCX4JATZ0391
	CARBON RES. 1/6W J 390 Ω	RCX6JATZ0391
R 3041	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 3042	CARBON RES. 1/4W J 2.7K Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7K Ω	RCX6JATZ0272
R 3043	CARBON RES. 1/4W J 2.7K Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7K Ω	RCX6JATZ0272
R 3044	CARBON RES. 1/4W J 2.7K Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7K Ω	RCX6JATZ0272
R 3045	CARBON RES. 1/4W J 560 Ω or	RCX4JATZ0561
	CARBON RES. 1/6W J 560 Ω	RCX6JATZ0561
R 3046	CARBON RES. 1/4W J 390 Ω or	RCX4JATZ0391
	CARBON RES. 1/6W J 390 Ω	RCX6JATZ0391
R 3047	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 3053	CARBON RES. 1/4W J 1M Ω or	RCX4JATZ0105
	CARBON RES. 1/6W J 1M Ω	RCX6JATZ0105
R 3054	CARBON RES. 1/4W J 8.2K Ω or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2K Ω	RCX6JATZ0822
R 3056	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 3057	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 3058	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 3059	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 3060	CARBON RES. 1/4W J 270 Ω or	RCX4JATZ0271
	CARBON RES. 1/6W J 270 Ω	RCX6JATZ0271
R 3061	CARBON RES. 1/4W J 270 Ω or	RCX4JATZ0271
	CARBON RES. 1/6W J 270 Ω	RCX6JATZ0271
R 3062	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 3063	CARBON RES. 1/4W J 82K Ω	RCX4JATZ0823
R 3064	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 3066	CARBON RES. 1/4W J 5.6K Ω or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 3067	CARBON RES. 1/4W J 2.7K Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7K Ω	RCX6JATZ0272
R 3068	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 3069	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 3070	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 3075	PCB JUMPER D0.6-P5.0	JW5.0T
R 3077	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 3090	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 3091	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 3092	CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R 4002	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 4003	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334
R 4004	CARBON RES. 1/4W J 12K Ω or	RCX4JATZ0123
	CARBON RES. 1/6W J 12K Ω	RCX6JATZ0123
R 4005	CARBON RES. 1/4W J 120 Ω or	RCX4JATZ0121
	CARBON RES. 1/6W J 120 Ω	RCX6JATZ0121
R 4006	CARBON RES. 1/4W J 5.6K Ω or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 4007	CARBON RES. 1/4W J 1.8M Ω or	RCX4JATZ0185
	CARBON RES. 1/6W J 1.8M Ω	RCX6JATZ0185
R 4008	CARBON RES. 1/4W J 15K Ω or	RCX4JATZ0153
	CARBON RES. 1/6W J 15K Ω	RCX6JATZ0153
R 4009	CARBON RES. 1/4W J 6.8K Ω or	RCX4JATZ0682
	CARBON RES. 1/6W J 6.8K Ω	RCX6JATZ0682
R 4010	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151

Ref. No.	Description	Part No.
R 4011	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 4012	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 4013	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 4014	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 4018	CARBON RES. 1/4W J 15 Ω	RCX4JATZ0150
R 4019	CARBON RES. 1/4W J 47 Ω or	RCX4JATZ0470
	CARBON RES. 1/6W J 47 Ω	RCX6JATZ0470
R 4020	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 4021	CARBON RES. 1/4W J 4.7 Ω or	RCX4JATZ04R7
	CARBON RES. 1/6W J 4.7 Ω	RCX6JATZ04R7
R 4022	CARBON RES. 1/4W J 3.9K Ω	RCX4JATZ0392
R 4024	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R 4025	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 4026	CARBON RES. 1/4W J 150K Ω or	RCX4JATZ0154
	CARBON RES. 1/6W J 150K Ω	RCX6JATZ0154
R 6001	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 6003	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6004	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6006	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 6007	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6011	CARBON RES. 1/4W J 1 Ω	RCX4JATZ0010
R 6012	CARBON RES. 1/4W J 1 Ω	RCX4JATZ0010
R 6013	CARBON RES. 1/4W J 1 Ω	RCX4JATZ0010
R 6014	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6015	CARBON RES. 1/4W J 1.5K Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5K Ω	RCX6JATZ0152
R 6016	CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
	CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R 6017	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 6018	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6019	CARBON RES. 1/4W J 12K Ω or	RCX4JATZ0123
	CARBON RES. 1/6W J 12K Ω	RCX6JATZ0123
R 6020	PCB JUMPER D0.6-P5.0	JW5.0T
R 6021	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 6024	CARBON RES. 1/4W J 6.8 Ω	RCX4JATZ06R8
R 6025	CARBON RES. 1/4W J 6.8 Ω	RCX4JATZ06R8
R 6026	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 6027	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 6028	CARBON RES. 1/4W J 1.2K Ω or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2K Ω	RCX6JATZ0122
R 6029	CARBON RES. 1/4W J 1.5K Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5K Ω	RCX6JATZ0152
R 6036	CARBON RES. 1/4W J 39K Ω or	RCX4JATZ0393
	CARBON RES. 1/6W J 39K Ω	RCX6JATZ0393
R 6037	CARBON RES. 1/4W J 39K Ω or	RCX4JATZ0393
	CARBON RES. 1/6W J 39K Ω	RCX6JATZ0393
R 6038	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 6039	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 6041	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 6042	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6043	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6044	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334
R 6045	CARBON RES. 1/4W J 4.7K Ω	RCX4JATZ0472
R 6046	CARBON RES. 1/4W J 47K Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47K Ω	RCX6JATZ0473
R 6050	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471

Ref. No.	Description	Part No.
R 6051	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 6052	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334
R 6053	PCB JUMPER D0.6-P5.0	JW5.0T
R 6054	CARBON RES. 1/4W J 180K Ω or	RCX4JATZ0184
	CARBON RES. 1/6W J 180K Ω	RCX6JATZ0184
R 6055	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6056	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6057	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6058	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 6062	CARBON RES. 1/4W J 6.8K Ω or	RCX4JATZ0682
	CARBON RES. 1/6W J 6.8K Ω	RCX6JATZ0682
R 6063	CARBON RES. 1/4W J 2.7K Ω or	RCX4JATZ0272
	CARBON RES. 1/6W J 2.7K Ω	RCX6JATZ0272
R 6064	CARBON RES. 1/4W J 680K Ω or	RCX4JATZ0684
	CARBON RES. 1/6W J 680K Ω	RCX6JATZ0684
R 6065	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 6066	CARBON RES. 1/4W J 470K Ω or	RCX4JATZ0474
	CARBON RES. 1/6W J 470K Ω	RCX6JATZ0474
R 6067	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 6068	CARBON RES. 1/4W J 330K Ω or	RCX4JATZ0334
	CARBON RES. 1/6W J 330K Ω	RCX6JATZ0334
R 6069	CARBON RES. 1/4W J 39 Ω	RCX4JATZ0390
R 6070	CARBON RES. 1/4W J 39 Ω	RCX4JATZ0390
R 6079	CARBON RES. 1/4W J 680K Ω or	RCX4JATZ0684
	CARBON RES. 1/6W J 680K Ω	RCX6JATZ0684
R 6080	CARBON RES. 1/4W J 680K Ω or	RCX4JATZ0684
	CARBON RES. 1/6W J 680K Ω	RCX6JATZ0684
R 6083	CARBON RES. 1/4W J 47K Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47K Ω	RCX6JATZ0473
R 6084	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R 6085	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 6086	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 6087	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 6088	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 6101	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6114	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6115	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6118	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 6127	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 6132	CARBON RES. 1/4W J 1.2K Ω or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2K Ω	RCX6JATZ0122
R 6133	CARBON RES. 1/4W J 47 Ω or	RCX4JATZ0470
	CARBON RES. 1/6W J 47 Ω	RCX6JATZ0470
R 6134	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 6136	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6140	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6141	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6142	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 6143	CARBON RES. 1/4W J 4.7M Ω or	RCX4JATZ0475
	CARBON RES. 1/6W J 4.7M Ω	RCX6JATZ0475
R 7001	CARBON RES. 1/4W J 47K Ω or	RCX4JATZ0473
	CARBON RES. 1/6W J 47K Ω	RCX6JATZ0473
R 7002	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
R 7003	CARBON RES. 1/4W J 33K Ω or	RCX4JATZ0333
	CARBON RES. 1/6W J 33K Ω	RCX6JATZ0333

Ref. No.	Description	Part No.
R 7004	CARBON RES. 1/4W J 2.4K Ω or	RCX4JATZ0242
	CARBON RES. 1/6W J 2.4K Ω	RCX6JATZ0242
R 7005	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 7006	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 7007	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 7008	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 7010	CARBON RES. 1/4W J 12KΩ or	RCX4JATZ0123
	CARBON RES. 1/6W J 12KΩ	RCX6JATZ0123
R 7011	PCB JUMPER D0.6-P5.0	JW5.0T
R 7013	CARBON RES. 1/4W J 75 Ω or	RCX4JATZ0750
	CARBON RES. 1/6W J 75 Ω	RCX6JATZ0750
R 7016	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 7017	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 7501	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 7502	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 7503	CARBON RES. 1/4W J 5.6K Ω or	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 7504	CARBON RES. 1/4W J 68 Ω or	RCX4JATZ0680
	CARBON RES. 1/6W J 68 Ω	RCX6JATZ0680
R 7505	CARBON RES. 1/4W J 68 Ω or	RCX4JATZ0680
	CARBON RES. 1/6W J 68 Ω	RCX6JATZ0680
R 7506	CARBON RES. 1/4W J 120 Ω or	RCX4JATZ0121
	CARBON RES. 1/6W J 120 Ω	RCX6JATZ0121
R 7507	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R 7508	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 7509	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 7510	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R 7511	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 7512	CARBON RES. 1/4W J 1K Ω	RCX4JATZ0102
J 5	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
	SWITCHES	
SW6001	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW6003	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW6004	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW6009	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW6011	PUSH SWITCH SKHMPF or	SSP0101AL002
	PUSH SWITCH HKW0602-01-010	SSP0101HD001
SW6012	PUSH SWITCH SPPB61 or	SSP0102AL001

Ref. No.	Description	Part No.
	PUSH SWITCH JPS1120-0601H	SSP0102SR001
SW7001	SLIDE SWITCH SLD-12-594	SSS0102KB013
	VARIABLE RESISTORS	
VR3001	CARBON P.O.T. 2.2K Ω B or	638A222
	CARBON P.O.T. 2K Ω B or	138J778
	CARBON P.O.T. 2K Ω B or	138N778
	CARBON P.O.T. 2K Ω B	VRCB202HH005
VR3003	CARBON P.O.T. 4.7K Ω B or	638A472
	CARBON P.O.T. 5K Ω B or	138J780
	CARBON P.O.T. 5K Ω B or	138N780
	CARBON P.O.T. 5K Ω B	VRCB502HH005
VR6001	CARBON P.O.T. 100K Ω B or	638A104
	CARBON P.O.T. 100K Ω B or	138J785
	CARBON P.O.T. 100K Ω B or	138N785
	CARBON P.O.T. 100K Ω B	VRCB104HH005
	CRYSTAL OSCILLATORS	
X 3001	X'TAL 4.433619MHZ or	1811388
	X'TAL 4.433619MHZ or	1811366
	X'TAL 4.433619MHZ	FXC445LGM001
X 6002	X'TAL 32KHZ(10PPM) or	1811350
	X'TAL 32KHZ(10PPM)	1811351
	MISCELLANEOUS	
	TUNER EXCLUSIVE(A)	0VDM07413
C 7028	CERAMIC CAP. (AX) F Z 0.1µF/50V	CCA1JZT0F104
C 7007	ELECTROLYTIC CAP. 1000µF/16V M	CE1CMASDL101
JW 03	WIRE	WX3801A6FF03
R 6122	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
TU7001	TUNER/IF/CONV. UNIT TCMB2792VD03A	UTUNPLBSM001
	TUNER EXCLUSIVE(B)	0VDM07414
C 7024	ELECTROLYTIC CAP. 47µF/16V M	CE1CMASDL470
C 7025	ELECTROLYTIC CAP. 22µF/16V M	CE1CMASDL220
C 7007	ELECTROLYTIC CAP. 470µF/16V M	CE1CMASDL471
R 6121	CARBON RES. 1/4W J 10K Ω	RCX4JATZ0103
R 7012	CARBON RES. 1/4W J 820KΩ or	RCX4JATZ0824
	CARBON RES. 1/6W 820KΩ	RCX6JATZ0824
TU7001	TUNER/IF/CONV. UNIT MRF7-UE35	UTUNPLBMM005
2B 5	HOLDER, F.I.P.(R)	0VM301821
2B 6	HOLDER, F.I.P.(L)	0VM301820
2B 8	BUSH, LED(B)	6N50114
2B 15	PLATE,GROUND (TUNER)	0VM406851
2L 071	SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
A 17	JACK BOARD(U11 PAL)	0VM201766
AC1001 ⚠	AC CORD LA-1517-1	WAE0202LW011
F 1001 ⚠	FUSE T1.60AH250V or	PAGC20BAG162
	FUSE T1.60AH250V	PBGZ20CDX006
FH1001	FUSE HOLDER FH-V-03078-1 or	XH01Z00DK002
	HOLDER, FUSE CNT41-0014	1790424
FH1002	FUSE HOLDER FH-V-03078-1 or	XH01Z00DK002
	HOLDER, FUSE CNT41-0014	1790424
FP6001	F.I.P. 10-BT-119G or	TVFD1C0FT024
	F.I.P. FIP10BTM6	TVFD1C0NE025
JK7501	SKIRT JACK, 21P CSS5021-1701R	JGZL210SR001
PS6001	REEL SENSOR SG-224 or	PCZLAZZKK004
	REEL SENSOR GP1S38 or	PCZLAZZSH001
	REEL SENSOR SG-231	PCZLAZZKK005
T 1001 ⚠	PULSE TRANS S1270G	LTT00EPSA008
	LEAD CLAMPER or	1790356
	LEAD CLAMPER GT-80M	XF00080HL001
	EYELET TYPE D-1	0VM406868

FUNCTION CBA (MCV-B)

Ref. No.	Description	Part No.
	FUNCTION CBA(MCV-B) Consists of the following:	———
	CONNECTOR	
CN5501	ANGLE SOCKET CONNECTOR, 3P	1770598
	RESISTORS	
R 5501	CARBON RES. 1/4W J 1.8K Ω or	RCX4JATZ0182
	CARBON RES. 1/6W J 1.8K Ω	RCX6JATZ0182
R 5502	CARBON RES. 1/4W J 1K Ω or	RCX4JATZ0102
	CARBON RES. 1/6W J 1K Ω	RCX6JATZ0102
R 5503	CARBON RES. 1/4W J 1.2K Ω or	RCX4JATZ0122
	CARBON RES. 1/6W J 1.2K Ω	RCX6JATZ0122
R 5504	CARBON RES. 1/4W J 1.5K Ω or	RCX4JATZ0152
	CARBON RES. 1/6W J 1.5K Ω	RCX6JATZ0152
R 5505	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 5506	CARBON RES. 1/4W J 3.9K Ω or	RCX4JATZ0392
	CARBON RES. 1/6W J 3.9K Ω	RCX6JATZ0392
R 5507	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 5508	CARBON RES. 1/4W J 3.9K Ω or	RCX4JATZ0392
	CARBON RES. 1/6W J 3.9K Ω	RCX6JATZ0392
R 5509	CARBON RES. 1/4W J 8.2K Ω or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2K Ω	RCX6JATZ0822
R 5510	CARBON RES. 1/4W J 22K Ω or	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
	SWITCHES	
SW5501	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW5502	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW5503	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW5504	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW5505	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW5506	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW5507	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW5508	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001

Ref. No.	Description	Part No.
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW5509	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017
SW5510	TACT SWITCH SKHHAP or	SST0101AL028
	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH KPT-1105BM or	SST0101JP001
	TACT SWITCH DHT-1102C or	SST0101LJ001
	TACT SWITCH EVQ PAC 09K	SST0101MS017

TYPE A: REMOTE SENSOR CBA (MCV-D)

Ref. No.	Description	Part No.
	REMOTE SENOSOR CBA (MCV-D) Consists of the following:	———
RS6001	REMOTE CONTROL UNIT HC-278N or	USESJRSKK008

or

TYPE B: Without REMOTE SENSOR PCB

Note: Remote Control Unit RS6001 has two type; Type A to be mounted on Remote Sensor CBA (MCV-D) and Type B to be directly mounted on Main CBA (MCV-A). (Type A is included in Remote Sensor CBA's table in the parts list.) Type B does not employ a remote sensor PCB. Type A and B are interchangeable for the same Main CBA (MCV-A).

Ref. No.	Description	Part No.
RS6001	REMOTE CONTROL UNIT PIC-12042LF	USESJRSKK015

Note:

IC5101 CAN BE EITHER SAA4700 or SDA5642.

Type: IC5101 (SAA4700)
VPS CBA (9A-1211 Only)

Ref. No.	Description	Part No.
	VPS CBA Consists of the following:	0VSA07210
	CAPACITORS	
C 5101	CERAMIC CAP.(AX) B J 1000pF/50V or	CDA1JJT0B102
	CERAMIC CAP.(AX) B K 1000pF/50V or	CDA1JKT0B102
	CERAMIC CAP. B J 0.001µF/50V or	3B41102T
	CERAMIC CAP. B K 0.001µF/50V	3B42102T
C 5102	CERAMIC CAP.(AX) X K 4700pF/16V or	CDA1CKT0X472
	CERAMIC CAP. X K 0.0047µF/16V	3X4C472T
C 5103	CERAMIC CAP.(AX) B J 470pF/50V or	CCA1JJT0B471
	CERAMIC CAP.(AX) B K 470pF/50V or	CCA1JKT0B471
	CERAMIC CAP. B J 470pF/50V or	3B41471T
	CERAMIC CAP. B K 470pF/50V	3B42471T
C 5104	SEMICONDUCTOR CAP. SR K 0.1µF/25V or	CDA1EKS0X104
	SEMICONDUCTOR CAP. SR K 0.1µF/25V	12Y2104S
C 5106	MYLAR CAP. 0.022µF/50V K or	CMA1JJS00223
	MYLAR CAP. 0.022µF/50V J	2254223S
C 5108	MYLAR CAP. 0.0047µF/50V J or	CMA1JJS00472
	MYLAR CAP. 0.0047µF/50V J	2254472S
	CONNECTOR	
CN5101	ANGLE SOCKET CONNECTOR, 9P	1770645
	IC	
IC5101	IC, VPS SAA4700	14D0738
	RESISTORS	
R 5101	CARBON RES. 1/4W J 4.7K Ω or	RCX4JATZ0472
	CARBON RES. 1/6W J 4.7K Ω	RCX6JATZ0472
R 5104	CARBON RES. 1/4W J 75K Ω or	RCX4JATZ0753
	CARBON RES. 1/6W J 75K Ω	RCX6JATZ0753
R 5105	CARBON RES. 1/4W J 8.2K Ω or	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2K Ω	RCX6JATZ0822
R 5111	CARBON RES. 1/4W J 1K Ω or	RCX4JATZ0102
	CARBON RES. 1/6W J 1K Ω	RCX6JATZ010

Type: IC5101 (SDA5642)
VPS CBA (9A-1211 Only)

Ref. No.	Description	Part No.
	VPS CBA Consists of the following:	0VSA07212
	CAPACITORS	
C 5101	CERAMIC CAP.(AX) B J 150pF/50V or	CCA1JJT0B151
	CERAMIC CAP.(AX) B K 150pF/50V or	CCA1JKT0B151
	CERAMIC CAP. B J 150pF/50V or	3B41151T
	CERAMIC CAP. B K 150pF/50V	3B42151T
C 5102	SEMICONDUCTOR CAP. SR K 0.033µF/25V or	CDA1EKS0X333
	SEMICONDUCTOR CAP. SR K 0.033µF/25V	12Y2333S
C 5103	SEMICONDUCTOR CAP. SR K 0.1µF/25V or	CDA1EKS0X104
	SEMICONDUCTOR CAP. SR K 0.1µF/25V	12Y2104S
	CONNECTOR	
CN5101	ANGLE SOCKET CONNECTOR, 9P	1770645
	IC	
IC5101	IC, VPS SDA5642	14D0739
	RESISTORS	
R 5101	CARBON RES. 1/4W J 2.2K Ω or	RCX4JATZ0222
	CARBON RES. 1/6W J 2.2K Ω	RCX6JATZ0222
R 5102	CARBON RES. 1/4W J 1M Ω or	RCX4JATZ0105
	CARBON RES. 1/6W J 1M Ω	RCX6JATZ0105
R 5103	CARBON RES. 1/4W J 100K Ω or	RCX4JATZ0104
	CARBON RES. 1/6W J 100K Ω	RCX6JATZ0104
R 5104	CARBON RES. 1/4W J 820K Ω or	RCX4JATZ0824
	CARBON RES. 1/6W J 820K Ω	RCX6JATZ0824
R 5105	CARBON RES. 1/4W J 5.1K Ω or	RCX4JATZ0512
	CARBON RES. 1/6W J 5.1K Ω	RCX6JATZ0512
R 5106	CARBON RES. 1/4W J 1K Ω or	RCX4JATZ0102
	CARBON RES. 1/6W J 1K Ω	RCX6JATZ0102
R 5107	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R 5110	CARBON RES. 1/4W J 820K Ω or	RCX4JATZ0824
	CARBON RES. 1/6W J 820K Ω	RCX6JATZ0824

DECK MECHANICAL PARTS LIST

Ref. No.	Description	Part No.
B 1	CHASSIS ASSEMBLY MK4	0VSA06769
B 2	CYLINDER ASSEMBLY(U11) PAL 2HD 2SP(FHT)/P.C	N2106CYL
B 3	LOADING MOTOR PREPARATION U5	0VSA04781
B 4	MOTOR HOLDER CALKING ASSEMBLY MK4	0VSA06865
B 5	CASSETTE DRIVE LEVER ASSEMBLY MK4	0VSA06819
B 6	PINCH ROLLER ARM ASSEMBLY U6	0VSA05848
B 7	PINCH ARM ASSEMBLY FUNAI	0VSA05924
B 8	PULLEY ASSEMBLY U6 MK2	0VSA05505
B 9	MOVING GUIDE S ASSEMBLY MK4 PLASTIC	0VSA06934
B 10	MOVING GUIDE T ASSEMBLY MK4 PLASTIC	0VSA06935
B 11	LOADING ARM T ASSEMBLY U6 MK2	0VSA05503
B 12	LOADING ARM B ASSEMBLY	0VSA04215
B 13	LOADING ARM M ASSEMBLY	0VM404693
B 14	PINCH ROLLER SPRING(U5)	0VM403949C
B 15	LUMIRROR WASHER 3.1X6X0.35	0VM403269
B 21	LOADING BELT U5 or	0VM403432
	LOADING BELT	0VM403952
B 22	P.S.W(CUT)	0VM404679
B 27	BAND BRAKE ASSEMBLY	0VSA04658
B 28	MAIN BRAKE S ASSEMBLY	0VSA04212
B 29	MAIN BRAKE T ASSEMBLY	0VSA04213
B 30	T BRAKE ARM ASSEMBLY	0VSA04641
B 31	AC HEAD ASSEMBLY MK4 R/P	0VSA06766
B 32	REEL BASE ASSEMBLY U5	0VSA04759
B 35	TAPE GUIDE ASSEMBLY	0VM402560
B 36	TENSION LEVER SPRING ASSEMBLY	0VSA04550
B 37	CAPSTAN MOTOR F2QKB92 or	MMDDB5ZSJ002
	CAPSTAN MOTOR DFX67B5VWA1 or	MMDCB12MS001
	CAPSTAN MOTOR DFX67D5VWA	MMDZB12MS004
B 38	MODE CHANGE LEVER JOG SHUTTLE MK3	0VM100511F
B 39	M BRAKE(S) SPRING	0VM402579A
B 40	M BRAKE(S)LEVER	0VM300753
B 41	S BREAKE ARM U6/U7	0VM301759
B 42	M BRAKE T ARM SPRING	0VM402582C
B 43	T BRAKE SPRING(2) MK3 JOG	0VM405798
B 45	M LEVER SPRING(3)	0VM406664
B 46	TAPE GUIDE ARM SPRING	0VM402581
B 47	TAPE GUIDE ARM ADJUST SCREW	0VM403242
B 49	BT DRIVE ARM	0VM300756K
B 51	CHANGE ARM or	0VM402441G
	CHANGE ARM A	0VM405857
B 52	CAPSTAN BELT or	0VM402397A
	CAPSTAN BELT	0VM403950A
B 53	P.S.W B	0VM402625
B 54	GROUND BRUSH ASSEMBLY U5 or	0VM404524
	GROUND BRUSH ASSEMBLY U5 or	0VM404534
	GROUND BRUSH ASSEMBLY U5	0VM404827
B 73	FE HEAD HVFHF0049A or	DHVEC01AL002
	FE HEAD MH-131SF4 or	DHVEC01LA003
	FE HEAD VTR-1X2ERS11-122	DHVEC01TE003
B 74	LUMINESCENCE PRISM(B) U6/U7	0VM301764H
B 76	REC ARM SPRING	0VM402578A
B 81	M LEVER HOLDER U6/U7	0VM301717E
B 83	RACK SPRING B	0VM403894A
B 103	REC ARM A	0VM301441J
B 104	REC ARM B	0VM301442I
B 105	REC SPRING	0VM403724
B 108	P.S.W F	0VM402629
B 121	WORM	0VM402429E
B 122	P.S.W C	0VM402626
B 123	P.S.W (WORM THRUST)	0VM403348
B 126	PULLEY U6/U7	0VM301718D
B 127	PULLEY FELT	0VM404952
B 128	KICK ARM HOLDER U6/U7	0VM301716
B 129	PRESS FIT BUSH	0VM403652A
B 130	KICK ARM U6/U7	0VM404382F
B 131	KICK ARM SPRING U6/U7	0VM404424D
B 132	CLUTCH ASSEMBLY U6 MK2	0VSA05509
B 133	ARM IDLER ASSEMBLY U9 4HEAD	0VSA06334
B 141	PULLEY SUB ASSEMBLY U6/U7	0VSA05998
B 142	SHAFT LOCK ASSEMBLY	0VSA04642
B 144	CLUTCH WASHER MK2	0VM404428
B 145	MAIN LEVER ASSEMBLY U9 4HEAD	0VSA06331
B 146	SPRING SUPPORTER	0VM405084A
B 147	STOPPER BOSS	0VM405188
B 148	TG CAP MK4	0VM406153A
B 300	FL ASSEMBLY MK4-2	0VDM07249
B 302	RACK MK3	0VM201456B
B 303	F DOOR OPENER(2) or	0VM302218A
	F DOOR OPENER(3)	0VM302351B
B 304	DOOR OPENER MK3	0VM302019B
B 307	F DOOR OPENER R SPRING MK3	0VM405214E
B 308	SLIDER SHAFT MK3	0VM405222B
B 311	DOOR OPENER SPRING MK3	0VM405302D
B 313	CASSETTE DRIVE GEAR R SPRING MK4	0VM406253
B 316	DOOR LOCK RELEASE ARM SPRING	0VM402508C
B 317	DOOR LOCK RELEASE ARM(3) MK3	0VM405034D
B 319	CASSETTE SPRING STOPPER	0VM402507I
B 326	DRIVE ARM SPRING JOG SHUTTLE MK3	0VM405172C
B 327	BUSH CLUTCH(2) JOG MK3	0VM405368
B 328	REEL DRIVE ARM JOG SHUTTLE MK3	0VM301978E
B 329	HOLDER KICK ARM JOG SHUTTLE MK3 or	0VM301979D
	HOLDER KICK ARM(2) JOG SHUTTLE MK3	0VM302219B
B 330	DRIVE ARM SHAFT JOG SHUTTLE MK3	0VM405170
B 331	DRIVE ARM ROLLER JOG SHUTTLE MK3	0VM405171
B 332	HOLDER ARM SPRING JOG SHUTTLE MK3	0VM405174C
B 334	P.S.W 1.7X3.2X0.5T	0VM403678
B 338	P.S.W CUT MK3(3.1X6X0.25)	0VM405809
B 339	REEL BASE ASSEMBLY U9 4HEAD	0VSA06332
B 344	CASSETTE GUIDE R MK4	0VM000074G
B 345	CASSETTE GUIDE L MK4	0VM100544E
B 346	FRONT GUIDE MK4	0VM201618A
B 347	DECKANGLE F MK4	0VM302263D
B 348	DECKANGLE B MK4	0VM302264D
B 349	MIRROR HOLDER L MK4	0VM302265D
B 350	SLIDER GEAR MK4	0VM406109A
B 351	MIRROR(3)	0VM406638
B 352	CASSETTE DRIVE GEAR MK4	0VM302260E
B 353	CASSETTE PLATE MK4	0VM302261C
B 354	SLIDER R MK4	0VM201616B
B 355	SLIDER L MK4	0VM201617D
B 356	LOCK LEVER MK4	0VM302262F
B 357	LOCK LEVER SPRING MK4	0VM406152
B 358	CAM MK4	0VM100543A
B 359	CLEAN LEVER MK4	0VM302259G
B 360	CLEAN ROLLER MK4	0VM406123
B 361	CLEAN BEARING MK4	0VM406124
B 362	MIRROR HOLDER R MK4	0VM302365B
B 363	GEAR SUPPORTER MK4	0VM406240
B 364	PLATE, GROUND A MK4	0VM406385B
L1011	SCREW, C-TIGHT M3X9 PAN HEAD+	GPMC3090
L1051	SCREW, S-TIGHT M2.6X6 PAN HEAD+ or	GPMS9060
	SCREW(CAPSTAN) M2.6X6 S-TIGHT	0VM405901

Ref. No.	Description	Part No.
L1053	SCREW, S-TIGHT M2.6X6 PAN HEAD+ or	GPMS9060
	SCREW(CAPSTAN) M2.6X6 S-TIGHT	0VM405901
L1061	SCREW, S-TIGHT M2.6X4 PAN HEAD+	GPMS9040
L1062	SCREW, S-TIGHT M2.6X8 PAN HEAD+	GPMS9080
L1081	SCREW, S-TIGHT 3X6 BIND HEAD+	GBMS3060
L1091	SCREW, S-TIGHT M3X6 CUP HEAD+	GCMS3060
L1101	SCREW, P-TIGHT 3X8 BIND HEAD+	GBMP3080
L1103	SCREW, P-TIGHT 3X8 BIND HEAD+	GBMP3080
L1105	SCREW, P-TIGHT 3X8 BIND HEAD+	GBMP3080
L1111	SCREW, P-TIGHT 3X8 WASHER HEAD+	GCMP3080
L1112	SCREW, P-TIGHT 3X8 WASHER HEAD+	GCMP3080
L1113	SCREW, P-TIGHT 3X8 WASHER HEAD+	GCMP3080
L1115	SCREW, P-TIGHT 3X8 WASHER HEAD+	GCMP3080
L1151	SCREW, SEMS M3X4 PAN HEAD +	CPM33040
L1191	SCREW, P-TIGHT M2.6X10 PAN HEAD+	GPMP9100
L1221	SCREW,SPECIAL	0VM403688
L1231	SPACER SCREW ASSEMBLY	0VM403752
L1241	P-TITE SCREW M2X6	GBMP2060
L1291	SCREW, P-TIGHT M2.6X6 PAN HEAD+	GPMP9060
L1311	SCREW, B-TIGHT M3X18 PAN HEAD+	GPMB3180
L1321	SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
L1331	SCREW, P-TIGHT M2.6X12	GCMP9120
L1341	P-TITE SCREW M2.6X8 BIND HEAD+	GBMP9080
L1351	SCREW, SEMS M2.6X6	0VM406255A

DECK ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE: Parts that not assigned part numbers (----------) are not available.

Tolerance of Capacitors and Resistors are noted with the following symbols.

C..........±0.25% D..........±0.5% F..........±1%
G..........±2% J..........±5% K..........±10%
M..........±20% N..........±30% Z..........+80/-20%

Head Amp CBA (PRV)

Ref. No.	Description	Part No.
	Head Amp CBA (PRV) Consists of the following:	**0VSA05794**
	CAPACITORS	
C 3501	CERAMIC CAP. F Z 0.1µF/50V	3F40104T
C 3502	ELECTROLYTIC CAP. 100µF/6.3V M H7	526R107
C 3503	ELECTROLYTIC CAP. 0.22µF/50V M H7	526W224
C 3504	CERAMIC CAP. Y M 0.01µF/16Vor	3Y4D103T
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3505	CERAMIC CAP. Y M 0.01µF/16Vor	3Y4D103T
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3506	CERAMIC CAP. Y M 0.01µF/16Vor	3Y4D103T
	CERAMIC CAP. F Z 0.01µF/16V	1220842T
C 3507	CERAMIC CAP. F Z 0.1µF/50V	3F40104T
C 3509	CERAMIC CAP. F Z 0.1µF/50V	3F40104T
C 3513	CERAMIC CAP. SL J 15pF/50V	3S41150T
C 3521	CERAMIC CAP. B J 100pF/50Vor	3B41101T
	CERAMIC CAP. B K 100pF/50V	3B42101T
C 3522	CERAMIC CAP. SL J 47pF/50V	3S41470T
	CONNECTORS	
CN3501	ANGLE SOCKET CONNECTOR, 15P	1770610
CN3502	FFC CONNECTOR BASE, SIDE 5P or	JC96J05ERC0C
	FFC CONNECTOR BASE, SIDE 5P	1700471
CN3503	CONNECTOR ASSEMBLY 2P	WX1K7010-007
	IC	
IC3501	IC, VIDEO H-AMP LA7376	QSBLA0SSY035
	COIL	
L 3501	INDUCTOR 22µH-K-26Tor	LLAXKDTKA220
	INDUCTOR 22µH-K-26T	LLAXKATTU220
	RESISTORS	
R 3501	CARBON RES. 1/4W J 22K Ωor	RCX4JATZ0223
	CARBON RES. 1/6W J 22K Ωor	132A223T
	CARBON RES. 1/6W J 22K Ω	RCX6JATZ0223
R 3502	CARBON RES. 1/4W J 8.2K Ωor	RCX4JATZ0822
	CARBON RES. 1/6W J 8.2K Ωor	132A822T
	CARBON RES. 1/6W J 8.2K Ω	RCX6JATZ0822
R 3503	CARBON RES. 1/4W J 1K Ωor	RCX4JATZ0102
	CARBON RES. 1/6W J 1K Ωor	132A102T
	CARBON RES. 1/6W J 1K Ω	RCX6JATZ0102
R 3504	CARBON RES. 1/4W J 5.6K Ωor	RCX4JATZ0562
	CARBON RES. 1/6W J 5.6K Ωor	132A562T
	CARBON RES. 1/6W J 5.6K Ω	RCX6JATZ0562
R 3505	CARBON RES. 1/4W J 33K Ωor	RCX4JATZ0333

Ref. No.	Description	Part No.
	CARBON RES. 1/6W J 33K Ωor	132A333T
	CARBON RES. 1/6W J 33K Ω	RCX6JATZ0333
	MISCELLANEOUS	
2B 2	SHIELD, TOP U7 2H	0VM301927
2B 3	SHIELD, BOTTOM U7 2H	0VM301928
CL3502	JUMPER WIRE, 6P	WX1K7010-012

JNT CBA

Ref. No.	Description	Part No.
	JNT CBA Consists of the following:	**0VSA06834**
	Joint CBA (Joint-A)	----------
	Mode SW CBA (Joint-B)	----------
	AC Head CBA (Joint-C)	----------

Joint CBA (Joint-A)

Ref. No.	Description	Part No.
	Joint CBA (Joint-A) Consists of the following:	----------
	CONNECTORS	
CN2801	FFC CONNECTOR BASE, TOP 9P or	JC2SJ09ERH0C
	FFC CONNECTOR BASE, TOP 9P or	1700915
	FFC CONNECTOR BASE, TOP 9P or	1700449
	FFC CONNECTOR BASE, TOP 9P or	1700515
	FFC CONNECTOR BASE, TOP 9P	1700986
CN2901	ANGLE SOCKET CONNECTOR, 20P	1770615
CN2902	ANGLE PIN HEADER, 2P	1740775
	RESISTORS	
R 2801	CARBON RES. 1/4W J 27K Ω or	RCX4JATZ0273
	CARBON RES. 1/6W J 27K Ω or	132A273T
	CARBON RES. 1/6W J 27K Ω	RCX6JATZ0273
R 2802	CARBON RES. 1/4W J 27K Ω or	RCX4JATZ0273
	CARBON RES. 1/6W J 27K Ω or	132A273T
	MISCELLANEOUS	
CL2901	JUMPER WIRE, 5P	WX1K7010-003
CL2902	JUMPER WIRE, 6P	WX1K7010-001
	FFC CABLE, 9P	WX3909QZ413

Mode SW CBA (Joint-B)

Ref. No.	Description	Part No.
	Mode SW CBA (Joint-B) Consists of the following:	----------
SW2901	MODE SWITCH HMW0420-810010	SSR0104HD002

ACE Head CBA (Joint-C)

Ref. No.	Description	Part No.
	ACE Head CBA (Joint-C) Consists of the following:	----------
CN2903	FLAT CABLE CONNECTOR 6P or	JEHBJ06JE01
	FLAT CABLE CONNECTOR 6P	JC88J06NB01

9A-1011 / 9A-1211

H4105/200VP

Printed in Japan
5 1030HO